Original operating instructions

Round baler

Comprima CF 155 XC
Comprima CV 150 XC
Comprima CV 210 XC

(from serial no.: 911 106)

Order no.: 150 000 046 11 en

13.01.2015

EC Declaration of Conformity

We **Maschinenfabrik Bernard Krone GmbH**

Heinrich-Krone-Str. 10, D-48480 Spelle

hereby declare as manufacturer of the product named below, on our sole responsibility, that the

Machine: **Krone Round Baler**

Type / types: **Comprima CF 155 XC**
Comprima CV 150 XC
Comprima CV 210 XC

to which this declaration refers is in compliance with the relevant provisions of

EG-directive 2006/42/EG (machines) and EG directive 2004/108/EG (EMV).

The signing Managing Director is authorised to compile the technical documents.

Spelle, 01.10.2013

Dr.-Ing. Josef Horstmann
(Managing Director, Design and Development)

Year of manufacture:	**Machine No.:**

1 Foreword

Dear Customer!

By purchasing the round baler, you have acquired a quality product from KRONE.

We are grateful for the confidence you have invested in us in buying this machine.

It is important to read the operating instructions very carefully before you start operating the machine to allow you to use the round baler to its full capacity.

The contents of this manual are laid out in such a way that you should be able to perform any task by following the instructions step by step. It contains extensive notes and information about maintenance, how to use the machine safely, secure working methods, special precautionary measures and available accessories. This information and these instructions are essential, important and useful for the operational safety, reliability and durability of the round baler.

Note

In the operating instructions which follow, the round baler will also be referred to as the "machine".

Please note:

The operating instructions are part of your machine.

Only operate this machine after you have been trained to do so and according to these instructions.

It is essential to observe the safety instructions!

It is also necessary to observe the relevant accident prevention regulations and other generally recognised regulations concerning safety, occupational health and road traffic.

All information, illustrations and technical data in these operating instructions correspond to the latest state at the time of publication.

We reserve the right to make design changes at any time and without notification of reasons. Should you for any reason not be able to use these operating instructions either wholly or partially, you can receive a replacement set of operating instructions for your machine by quoting the number supplied overleaf.

We hope that you will be satisfied with your KRONE machine.

Maschinenfabrik Bernard Krone GmbH

Spelle

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3 To this Document

3.1 Validity

These operating instructions are valid for round balers of types:

Comprima F 155 XC X-treme Comprima V 150 XC X-treme

3.2 Target group of this document

This document is intended for the farmer and for other users who have no agricultural training but who have been instructed in the use of the machine.

3.3 How to use this document

Table of contents/headers:
The table of contents, as well as the headers in these instructions, are used for quick navigation in the chapters.

Index:
You can use the index to find specific information on the required subject via keywords which are in alphabetical order. The index is on the last page of these instructions.

Cross-references:
Cross-references to another place in the operating instructions or to another document are in the text and specify the chapter and subchapter or section. The name of the subchapter or section is in quotation marks.
Example:
Check that all screws on the machine are tight, see chapter Maintenance, "Tightening torques for hexagonal head screws".
The subchapter or the section can be found via an entry in the table of contents and in the index.

Directional information in these operating instructions, such as front, rear, right and left, applies in the direction of travel of the machine.
Orientation information concerning a diagram of a machine detail refers to the diagram itself and is not relative to the direction of travel.

3.4 Identifying Symbols in the Operating Instructions

The safety instructions contained in this manual which could result in personal injury if not followed are identified by the general danger sign:

3.5 Identification of the hazard warnings

Danger!

DANGER! - Type and source of the hazard!
Effect: Danger to life or serious injuries.
- Measures for hazard prevention

Warning !

WARNING! - Type and source of the hazard!
Effect: Injuries, serious material damage.
- Measures for hazard prevention

Caution!

CAUTION! - Type and source of the hazard!
Effect: Property damage
- Measures for risk prevention.

General function instructions are indicated as follows:
Note!

Note - Type and source of the note
Effect: Economic advantage of the machine
- Actions to be taken

Instructions which are attached to the machine need to be followed and kept fully legible.

4 Safety

4.1 Purpose of Use

The round balers with integrated wrapping machine of type Comprima CF155 XC, Comprima CV150/210 XC are pick-up balers with a variable bale chamber. These balers cut, compact and wrap agricultural crop into round bales.
These bales can be wrapped with sheet immediately after the baling process. If necessary, it is also possible to put them down without sheet wrapping.
Round balers are serially equipped with a net tying and a rotating chopping system.

WARNING! – Intake and baling of pressing material not mentioned!

Effect: Damage to the machine

Collecting and baling materials that are not cited here is permitted only in agreement with the manufacturer. The basic requirements in any case are swath form loading of the crops and automatic intake by the Pick-up as it passes over them.

4.2 Intended use

The round baler is built exclusively for customary use in agricultural work (intended use).

Unauthorised modifications to the machine may have a negative effect on the machine characteristics or safe and reliable use of the machine or may interfere with proper operation. Unauthorised modifications shall therefore release the manufacturer of any liability for consequential damage.

4.3 Basic safety instructions

Non-compliance with the safety instructions and warnings

Non-compliance with the safety instructions and warnings may result in injuries and damage to the environment and property.

4.3.1 Importance of the operating instructions

The operating instructions are an important document and a part of the machine. They are intended for the user and contain information relevant to safety.
Only the procedures indicated in the operating instructions are reliable. If the operating instructions are not followed, people may be seriously injured or killed.

- Before using the machine for the first time, read and follow all the "Basic safety instructions" in the chapter Safety.
- Before working, also read and observe the respective sections in the operating instructions.
- Retain the operating instructions and ensure that they are always available.
- Hand over the operating instructions to subsequent users.

4.3.2 Personnel qualification

If the machine is not used properly, people may be seriously injured or killed. To avoid accidents, each person who works with the machine must satisfy the following minimum requirements:

– He is physically capable of controlling the machine.
– He can work safely with the machine in accordance with these operating instructions.
– He understands the method of operation of the machine within the scope of his work and can identify and avoid the dangers associated with the work.
– He has read the operating instructions and can implement the information in the operating instructions accordingly.
– He is familiar with driving vehicles safely.
– For road travel he has adequate knowledge of the highway code and has the stipulated driving licence.

4.3.3 Children in danger

Children cannot assess danger and behave unpredictably.
As a result, children are especially at risk.

- Keep children away from the machine.
- Keep children away from consumables.
- Especially before starting up and moving the machine, ensure that there are no children in the danger zone.

4.3.4 Connect the machine to the tractor

If the tractor and the machine are not correctly connected, there is a risk of causing serious accidents.

- When connecting front attachments or trailers, follow all operating instructions:
  - The operating instructions for the tractor
  - The operating instructions for the machine
  - The operating instructions for the universal shaft
- Follow the coupling instructions, see chapter on starting up "Connect the machine to the tractor".
- Note the modified driving behaviour of the combination.

4.3.5 Structural changes to the machine

Structural changes and enhancements may impair the functionality and operational safety of the machine. As a result, people may be seriously injured or killed.

- Have structural changes and enhancements performed by an authorised service centre only.

4.3.6 Additional equipment and spare parts

Additional equipment and spare parts, which do not comply with the requirements of the manufacturer, may impair the operational safety of the machine and cause accidents.

- To ensure operational safety, use original or standard parts which comply with the requirements of the manufacturer. If in doubt, have parts verified by the dealer or manufacturer.

4.3.7 Workstations and passengers

Control of the moving machine

The moving machine requires the driver to react quickly at any time. Otherwise, the machine may move in an uncontrolled manner and seriously injure or kill people.

- Start the engine from the driver's seat only.
- Never leave the driver's seat while the machine is moving.
- Never climb in or out of the machine while it is moving.

Passengers

Passengers may be seriously injured by the machine or fall off the machine and get run over. Ejected objects may strike and injure passengers.

- Never let people ride on the machine.

4.3.8 Operational safety: Technically perfect condition

Operation only when the machine has been started up correctly

If the machine is not started up correctly according to these operating instructions, the operational safety of the machine is not ensured. As a result, accidents may occur and people may be seriously injured or killed.

- Do not use the machine unless it has been started up correctly, see chapter Start-up.

Technically perfect condition of the machine

Improper maintenance and adjustment may affect the operational safety of the machine and cause accidents. As a result, people may be seriously injured or killed.

- Perform all maintenance and adjustment work according to the chapters Maintenance and Adjustment.
- Before performing any maintenance or adjustment work, shut down and safeguard the machine, see chapter Safety "Shutting down and safeguarding the machine".

Danger resulting from damage to the machine

Damage to the machine may impair the operational safety of the machine and cause accidents. As a result, people may be seriously injured or killed. The following parts of the machine are particularly important for safety:

– Brakes
– Steering
– Safety devices
– Connecting devices
– Lighting
– Hydraulic system
– Tyres
– Universal shaft

If there are doubts about the operational safety of the machine, for example due to leaking consumables, visible damage or an unexpected change to the driving behaviour:

- Shut down and safeguard the machine, see chapter Safety, "Shutting down and safeguarding the machine".
- Immediately eliminate potential causes of damage, for example heavy soiling, or tighten slack screws.
- Determine the cause of damage according to these operating instructions, see chapter Malfunctions – Cause and remedy.
- If possible, repair the damage according to these operating instructions.
- In the case of damage which may affect operational safety and cannot be repaired according to these operating instructions: Have damage repaired by a qualified service centre.

Technical limit values

If the technical limit values of the machine are not observed, the machine may be damaged. As a result, accidents may occur and people may be seriously injured or killed. Observance of the following technical limit values is particularly important for safety:

– Permitted gross weight
– Maximum axle loads
– Maximum payloads
– Maximum trailer load
– Maximum bearing load
– Maximum transport height
– Maximum speed

• Observe limit values, see chapter Description of machine, "Technical data".

4.3.9 Danger zones

Danger zones on the tractor and the machine

The area around the tractor and the machine is a danger zone.
There are the following hazards in this danger zone:

– The tractor and the machine may start moving or rolling away and run over people.
– If the power lifter is unintentionally actuated, the machine may make hazardous movements.
– Defective or insecurely attached electrical cables may cause fatal electric shocks.
– Defective or insecurely attached hydraulic or pneumatic lines may become detached and flail around. Hydraulic oil may escape under high pressure and cause serious injuries to the skin or face.
– Clothing may become caught and wrapped around an exposed PTO shaft or a damaged or incorrectly installed universal shaft.
– When the drive is switched on, machine parts may rotate or swivel.
– Hydraulically raised machine parts may descend unnoticed and slowly.

If the danger zone is not observed, people may be seriously injured or killed.

• Keep people away from the danger zone of the tractor and the machine.
• Do not switch on the drives and engine until there is nobody in the danger zone.

The safety clearance is:

– 3 metres on either side of the machine.
– 5 metres behind the machine.

• Before working in front of and behind the tractor and in the danger zone of the machine: • Shut down and safeguard the machine, see chapter Safety, "Shutting down and safeguarding the machine". This also applies to brief inspection work. Many serious accidents in front of and behind the tractor and the machine occur due to negligence and running machines.
• Consider the information in all relevant operating instructions.
  – The operating instructions for the tractor
  – The operating instructions for the machine
  – The operating instructions for the universal shaft

Danger zone between tractor and machine

People standing between the tractor and machine may be seriously injured or killed if the tractor rolls away or by machine movements:

- Before starting all work between the tractor and machine: • Shut down and safeguard the machine, see chapter Safety, "Shutting down and safeguarding the machine". This also applies to brief inspection work. Many serious accidents occur due to negligence and running machines.
- If the power lifter has to be actuated, keep all people away from the area of movement of the power lifter.

Danger zone when drive switched on

When the drive is switched on, there is a danger to life from rotating and swivelling machine parts. There must be nobody in the danger zone of the machine.

- Before starting the machine, direct all people out of the danger zone of the machine.
- If a hazardous situation arises, switch off drives and diesel engine immediately.

Danger zone of the P.T.O. shaft

People may be caught, pulled in and seriously injured by the PTO shaft and the driven components.

Before engaging the PTO shaft:

- Make sure that all safety devices are fitted and in the protection position.
- Ensure that the selected speed and direction of rotation of the PTO shaft match the permitted speed and direction of rotation of the machine.
- Ensure that nobody is in the danger zone of the PTO shaft or the universal shaft.
- If the angles are too large, switch off the PTO shaft. The machine may be damaged. Parts may be flung out and cause injury to persons.
- If the PTO shaft is not required, switch off the PTO shaft.

Danger zone universal shaft

People may become caught by the universal shaft, pulled in and seriously injured.

- Ensure that the universal shaft guards are attached and functional.
- Ensure that nobody is in the danger zone of the PTO shaft or the universal shaft.
- Provide the section tube and universal shaft guards with adequate cover.
- Allow the universal shaft locks to engage.
- Attach the chains to prevent the universal shaft guards from rotating with the shaft.
- Follow the operating instructions for the universal shaft.

Risk of injury due to machine parts that continue to run

After switching off the drives, the following machine parts continue to run:

– Universal shaft
– Drive chains
– Pick-up
– Net rolls
– Floor conveyor
– Wrapper

If machine parts continue to run, persons may be seriously injured or killed.

- Stop and secure the machine, refer to chapter Safety “Stopping and Securing the Machine“.
- Only touch machine parts when they are at a standstill.

4.3.10 Keeping safety devices functional

If safety devices are missing or damaged, people may be seriously injured or killed by moving machine parts.

- Replace damaged safety devices.
- Re-install all removed safety devices and all other parts and move them into protective position before starting up the machine.
- If it is doubtful whether all safety devices have been correctly installed and are functional, have a service centre check them.

4.3.11 Personal protective equipment

The wearing of personal protective equipment is an important safety measure. Missing or unsuitable personal protective equipment increases health risks and injuries.
Personal protective equipment is for example:

– Work gloves
– Safety boots
– Protective clothing
– Breathing protection
– Hearing protection
– Face and eye protection

- Specify and provide personal protective equipment for the particular job.
- Use only personal protective equipment which is in proper condition and offers effective protection.
- Adjust personal protective equipment to the person, for example the size.

Wear suitable clothing

Loose clothing increases the risk of it becoming caught or wrapped around rotating parts and of it becoming caught on protruding parts. As a result, people may be seriously injured or killed.

- Wear tight-fitting clothing.
- Never wear rings, chains or other items of jewellery.
- Cover long hair with a hairnet.
- Wear sturdy shoes or protective work boots.

4.3.12 Safety signs on the machine

Safety stickers on the machine warn of hazards in danger areas and are an important component of the safety equipment of the machine. Missing safety stickers increase the risk of serious and fatal injuries.

- Clean dirty safety stickers.
- After cleaning, always check that safety stickers are complete and legible.
- Immediately replace missing, damaged and unrecognisable safety stickers.
- Provide spare parts with the designated safety stickers.

Description, explanation and order numbers of the safety stickers, see chapter Safety, "Safety stickers on the machine".

4.3.13 Traffic safety

Dangers when driving on roads and in fields

The attached or coupled work machine changes the handling characteristics of the tractor. The handling characteristics are also dependent on the operational state, the filling or loading and on the ground condition. If the driver does not consider changed handling characteristics, he may cause accidents.

- Observe procedures for driving on roads and in fields, see chapter "Driving and transportation".

Prepare the machine for road travel

If the machine is not prepared properly for road travel, serious accidents may occur with traffic.

- Before travelling on the road, always prepare the machine for road travel, see chapter Driving and transportation, "Preparations for road travel".

Danger of overturning

The machine may overturn when driving on slopes. As a result, accidents may occur and people may be seriously injured or killed. The risk of overturning depends on many factors.

- Observe procedures for driving, see chapter Driving and transportation.

4.3.14 Parking the machine safely

The parked machine may overturn. People may be crushed and killed.

- Park the machine on a stable and even surface.
- Before adjusting, repairing, servicing or cleaning the machine, ensure that it is securely positioned. If in doubt, support the machine.
- In the chapter Driving and transportation note the section "Parking the machine".

Unattended parking

Adults and children are at risk from an inadequately secured and unattended parked machine with or without a connected front attachment or trailer.

- Before leaving the machine: Shut down and safeguard the machine, see chapter Safety, "Shutting down and safeguarding the machine".

4.3.15 Consumables

Unsuitable consumables

Consumables which do not comply with the requirements of the manufacturer, may impair the operational safety of the machine and cause accidents.

- Use only consumables which comply with the requirements.

For the requirements of fuels, see chapter Description of machine, "Consumables".

Protection of the environment and disposal

Consumables such as diesel fuel, brake fluid, antifreeze and lubricants may damage the environment and the health of people.

- Do not release consumables into the environment.
- Absorb leaked consumables with an absorbent material or with sand, place in a liquid-tight labelled container and dispose of according to the official regulations.

4.3.16 Dangers associated with the operational environment

Danger of fire

Combustible materials can accumulate in the machine due to operation or animals such as rodents or nesting birds. The danger of soiling applies in particular when working in dry or turbulent conditions.

Dust, soiling and harvest residues can ignite on hot parts and cause fires that can seriously injure or kill persons.

- Check and clean the machine every day before using it for the first time.
- Regularly check and clean the machine during the working day.
- Keep the fire extinguisher ready to use at all times.

4.3.17 Sources of danger on the machine

Noise may damage your health

When working continuously with the machine, health may be damaged, such as hardness of hearing, deafness or tinnitus. When the machine is used at high speed, the noise level also increases.

- Before starting up the combination of tractor and machine, estimate the risk caused by noise. Depending on the ambient conditions, working hours and the working and operating conditions of the machine, specify and use suitable hearing protection. In doing so, consider the sound pressure level, see chapter Description of machine, "Technical Data".
- Specify rules for the use of hearing protection and for the working time.
- During operation, keep the windows and doors of the cabin closed.
- Remove the hearing protection when travelling on the road.

Liquids under pressure

The following liquids are under high pressure:

– Hydraulic oil

Liquids under high pressure may penetrate the body through the skin and cause serious injuries.

- If a damaged pressure system is suspected, immediately contact a qualified service centre.
- Never search for leaks with bare hands. Even a pin-sized hole may cause serious injuries.
- Keep body and face away from leaks.
- If liquids penetrate the body, immediately consult a doctor. The liquid must be removed from the body as quickly as possible. Danger of infection!

Hot liquids

Risk of burns and scalding from hot liquids!

- When draining hot consumables, wear protective gloves.
- If required, leave liquids and machine parts to cool down before performing repair, maintenance and cleaning work.

A damaged compressed air system may damage your health

Damaged compressed air hoses in the compressed air system may cause hoses to tear off. Flailing hoses may cause serious injuries.

- If it is suspected that the compressed air system is damaged, immediately contact a service centre.

4.3.18 Dangers associated with certain activities: Climbing up and down

Climbing up and down safely

People who behave carelessly when climbing up and down may fall off the ladder. People, who climb onto the machine without using the designated ladders, may slip, fall and seriously injure themselves.

Dirt as well as operating fluids and lubricants may cause you to lose your footing.

- Always keep the steps and platforms clean and in a proper condition to prevent people from losing their footing.
- Never climb up and down while the machine is moving.
- Face the machine when climbing up and down.
- When climbing up and down, maintain a three-point contact with the steps and hand rails (always two hands and one foot or two feet and one hand on the machine).
- When climbing up and down, never use the controls as handles. Inadvertent activation of the controls may cause functions to be unintentionally actuated which could be hazardous.
- When climbing down, never jump off the machine.
- Climb up and down using only the steps and platforms designated in these operating instructions, see chapter Description of machine, "Ladders".

4.3.19 Dangers associated with certain activities: Work on the machine

Work on the machine only when it has been shut down

If the machine has not been shut down and safeguarded, parts may move unintentionally or the machine may start moving. As a result, people may be seriously injured or killed.

- Before performing any work on the machine, such as making adjustments, cleaning, preparing for road travel, preparing for work, servicing or rectifying malfunctions, shut down and safeguard the machine, see chapter Safety "Shutting down and safeguarding the machine".

Maintenance and repair work

Incorrect maintenance and repair work will endanger operational safety. As a result, accidents may occur and people may be seriously injured or killed.

- Only perform work which is described in these operating instructions. Before performing any work, shut down and safeguard the machine, see chapter Safety, "Shutting down and safeguarding the machine".
- All other maintenance and repair work may be performed by a qualified service centre only.

Raised machine and machine parts

The raised machine may accidentally drop, roll away or overturn and crush or kill people.

- Do not stand under the raised machine. First put the machine down.
- Before performing any work under the machine, securely support the machine, see chapter Safety "Securely supporting the raised machine and machine parts".
- Before performing any work on or under raised machine parts, lower the machine parts or secure them mechanically with rigid safety supports or with a hydraulic shut-off device to prevent them from dropping.

Danger associated with welding work

Improper welding work will endanger the operational safety of the machine. As a result, accidents may occur and people may be seriously injured or killed.

- Before performing welding work on the machine, obtain the consent of KRONE customer service and, if required, identify alternatives.
- Have welding work performed by experienced technicians only.

4.3.20 Dangers associated with certain activities: Working on wheels and tyres

Fitting/removing wheels and tyres

Improper fitting or removal will endanger operational safety. As a result, accidents may occur and people may be seriously injured or killed.
The fitting of wheels and tyres requires adequate knowledge and approved tools.

- If there is a lack of knowledge, have the wheels and tyres fitted by the KRONE dealer or by a qualified tyre service.
- When fitting tyres on the wheel rims, never exceed the maximum permitted pressure specified by the tyre manufacturers, otherwise the tyre or even the wheel rim may explode.
- When fitting the wheels, tighten the wheel nuts to the stipulated torque, see chapter Maintenance "Tyres".

4.3.21 Behaviour in hazardous situations and when accidents occur

Neglected or incorrect procedures in hazardous situations may obstruct or prevent the rescue of people in danger. Difficult rescue conditions will impair the chances of helping and healing the injured.

- In principle: Switch off the machine.
- Gain an overview of the hazardous situation and identify the cause of the hazard.
- Safeguard the accident location.
- Rescue people from the danger zone.
- Withdraw from the danger zone and do not enter again.
- Alert rescue teams and, if possible, fetch help.
- Take immediate life-saving measures.

4.4 Safety routines

4.4.1 Stopping and securing the machine

WARNING!

Crush hazard due to movement of the machine or machine parts!

If the machine has not been shut down, the machine or machine parts may move unintentionally. As a result, people may be seriously injured or killed.

- Before leaving the machine: Shut down and secure the machine.

To park the machine securely:

- Park the machine on a stable and even surface.
- Switch off the drives and wait until coasting parts have come to a standstill.
- Switch off the tractor engine, remove the ignition key and take it with you.
- Use the parking brakes to secure the machine and tractor from rolling away.

4.4.2 Supporting lifted machine and machine parts securely

WARNING!

Risk of injury due to movement of the machine or machine parts

If the machine is not supported securely, the machine or machine parts may roll, fall or drop. As a result, people may be seriously injured or killed.

- Before working on or under raised components: Securely support machine or machine parts.

To securely support the machine or machine parts:

- Shut down and safeguard the machine, see chapter Safety, "Shutting down and safeguarding the machine".
- Before performing any work on or under raised machine parts, lower the machine parts or secure them mechanically with rigid safety supports (e.g. support stand, crane) or with a hydraulic shut-off device (e.g. stop cock) to prevent them from dropping.
- Never support the machine or machine parts with materials which can buckle.
- Never support the machine or machine parts with hollow blocks or bricks. Hollow blocks or bricks may break under continuous load.
- Never work under the machine or machine parts which are held up by a car jack.

4.4.3 Coupling the machine safely

WARNING!
Risk of injury when coupling the machine
The machine or machine parts may move unintentionally while the machine is coupled to the tractor. As a result, people may be seriously injured or killed.
- When coupling the machine, perform the following steps:

- Never stand between the tractor and the machine while coupling the machine to the tractor.
- Depressurise the tractor hydraulics.
- Switch off the electronic systems.
- Shut down and safeguard the machine, see chapter Safety, "Shutting down and safeguarding the machine".
- Only couple the hydraulic hoses if the hydraulic systems on the tractor and the machine are depressurised.
- Couple the compressed air braking system, depending on the version of the machine.
- Couple the hydraulic brake, depending on the version of the machine.
- Couple and secure the universal shaft.
- Connect the lighting cable.
- Connect the power cable.
- Connect the terminal.

4.4.4 Uncoupling the machine safely

WARNING!
Risk of injury when uncoupling the machine
The machine or machine parts may move unintentionally while the machine is being uncoupled. As a result, people may be seriously injured or killed.
- When uncoupling the machine, perform the following steps:

- Shut down and safeguard the machine, see chapter Safety, "Shutting down and safeguarding the machine".
- Lower the support jack.
- Depressurise the tractor hydraulics.
- Switch off the electronic systems.
- Only uncouple the hydraulic hoses if the hydraulic systems on the tractor and the machine are depressurised.
- Uncouple the compressed air brake, depending on the version of the machine.
- Uncouple the hydraulic brake, depending on the version of the machine.
- Disconnect the lighting cable from the tractor.
- Disconnect the power cable from the tractor.
- Uncouple the universal shaft and place it on the holder provided.
- Never stand between the tractor and the machine when uncoupling the machine from the tractor.

4.4.5 Preparing the machine for repair, maintenance and adjustment work

WARNING!

Risk of injury during repair, maintenance and adjustment work on the machine.

If the machine has not been shut down, the machine or machine parts may move unintentionally. As a result, people may be seriously injured or killed.

If the machine is not supported securely, the machine or machine parts may roll, fall or drop. As a result, people may be seriously injured or killed.

- Before starting repair, maintenance and adjustment work, perform the following steps:

- Shut down and safeguard the machine, see chapter Safety, "Shutting down and safeguarding the machine".
- The raised machine or machine parts must be securely supported, see chapter Safety "Securely supporting the raised machine and machine parts".

4.4.6 Starting the machine safely

WARNING!

Risk of injury when starting up the machine

If the machine has not been safely placed in operation, the machine or machine parts may move unintentionally. As a result, people may be seriously injured or killed.

- Before starting up the machine, ensure that the following prerequisites are met:

– The hydraulic lines are connected.
– The compressed air brake is coupled (depending on equipment).
– The hydraulic brake is connected (depending on equipment).
– The universal shaft is coupled and secured.
– The lighting system is connected.
– The terminal is connected.
– The safety chain is attached (not stipulated in all countries).
– All safety equipment is in place, is proper condition, and in the protective position.
– The PTO speed of 540 rpm is not exceeded.
– The universal shaft prescribed by the manufacturer is used.
– The hoses, cables and ropes are laid so that they do not scrape, come under tension or become jammed or come in contact with other parts (such as the tractor tyres).
– The parking brake is released.
– Machine parts of the tractor do not come into contact with parts of the machine (especially when turning).
– There are no persons in the machine danger zone.

4.5 Position of the Adhesive Safety Stickers on the Machine

WARNING!

Danger of injury on machine parts if danger zones have not been marked when warning pictograms are missing, damaged or illegible.

Danger of injury due to dangerous parts and other residual risks as users or third parties enter the danger area or reach into it as they are not aware of the danger.

- Immediately replace damaged or illegible labels.
- Following repair work, always attach appropriate adhesive safety labels to all the replaced, modified or repaired components.
- Never clean areas carrying an adhesive safety label using a high-pressure cleaner.

  Familiarise yourself with the statement of the warning pictograms. The adjacent text and the selected location on the machine provide information on the special danger spots on the machine.

4.6 Introduction

The KRONE round baler is equipped with all safety devices (protective devices). However, it is not possible to eliminate all potential hazards on this machine as this would impair its full functional capability. Hazard warnings are attached to the machine in the relevant areas to warn against any dangers. The safety instructions are provided in the form of so-called warning pictograms. Important information on the position of these safety signs and what they mean is given below!

Comprima CF 155 XC/Comprima CV 150 XC

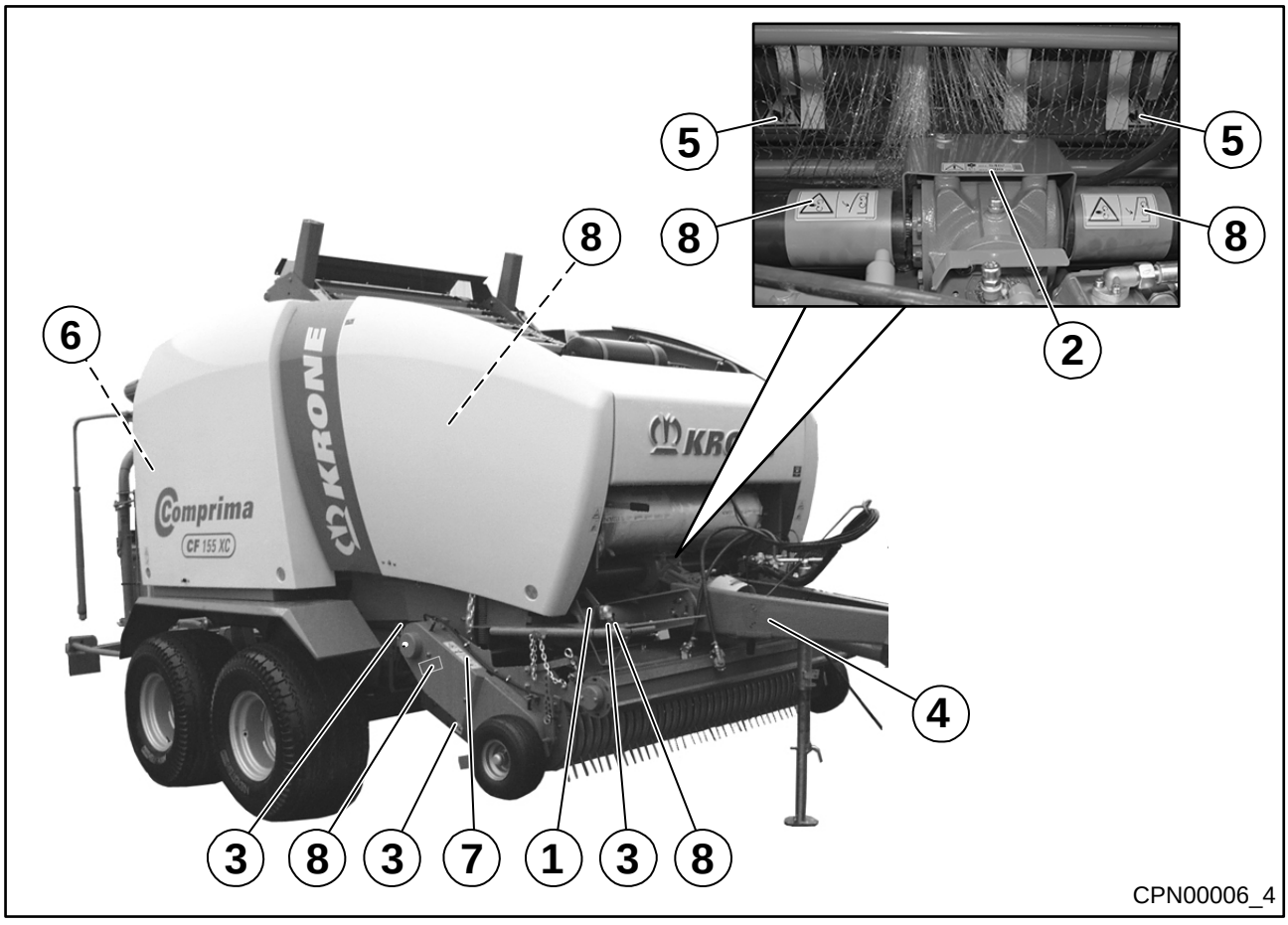
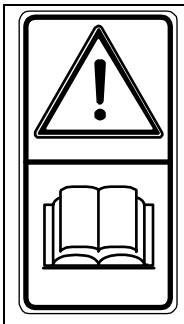
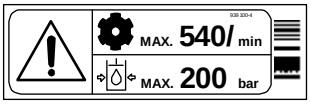


Fig. 1

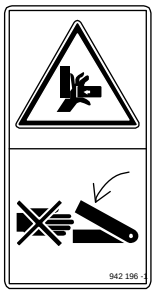
1) Order no. 939 471 1 (1x)

	**Danger due to incorrect operation and lack of knowledge** Incorrect operation and lack of knowledge of the machine as well as incorrect behaviour in hazardous situations is risking the life of the operator and third parties. • Before starting up the machine, read and follow the operating instructions and safety instructions.

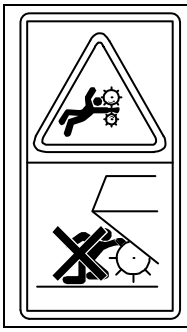
2) Order no. 939 100 4 (1x)

	**Danger if the maximum permitted PTO speed or the maximum permitted operating pressure is exceeded.** If the maximum permitted PTO speed is exceed, parts of the machine may be destroyed or forcibly ejected. If the maximum permitted operating pressure is exceeded, hydraulic parts may be damaged. As a result, people may be receive serious or life threatening injuries. • Observe the permitted PTO speed. • Observe the permitted operating pressure.

3) Order No. 942 196 1 (8x)

	**Danger due to crushing or shearing** Risk of injury due to crushing or shearing points on moving machine parts. • While parts are moving, never reach into areas where there is a risk of being crushed.

4) Order no. 939 407 1 (2x)

	**Danger due to rotating pick-up.** There is a danger of being drawn in if you approach the danger zone and if you use your hands or feet to clear clogging. • Before working on the pick-up, switch off the PTO shaft and the engine.

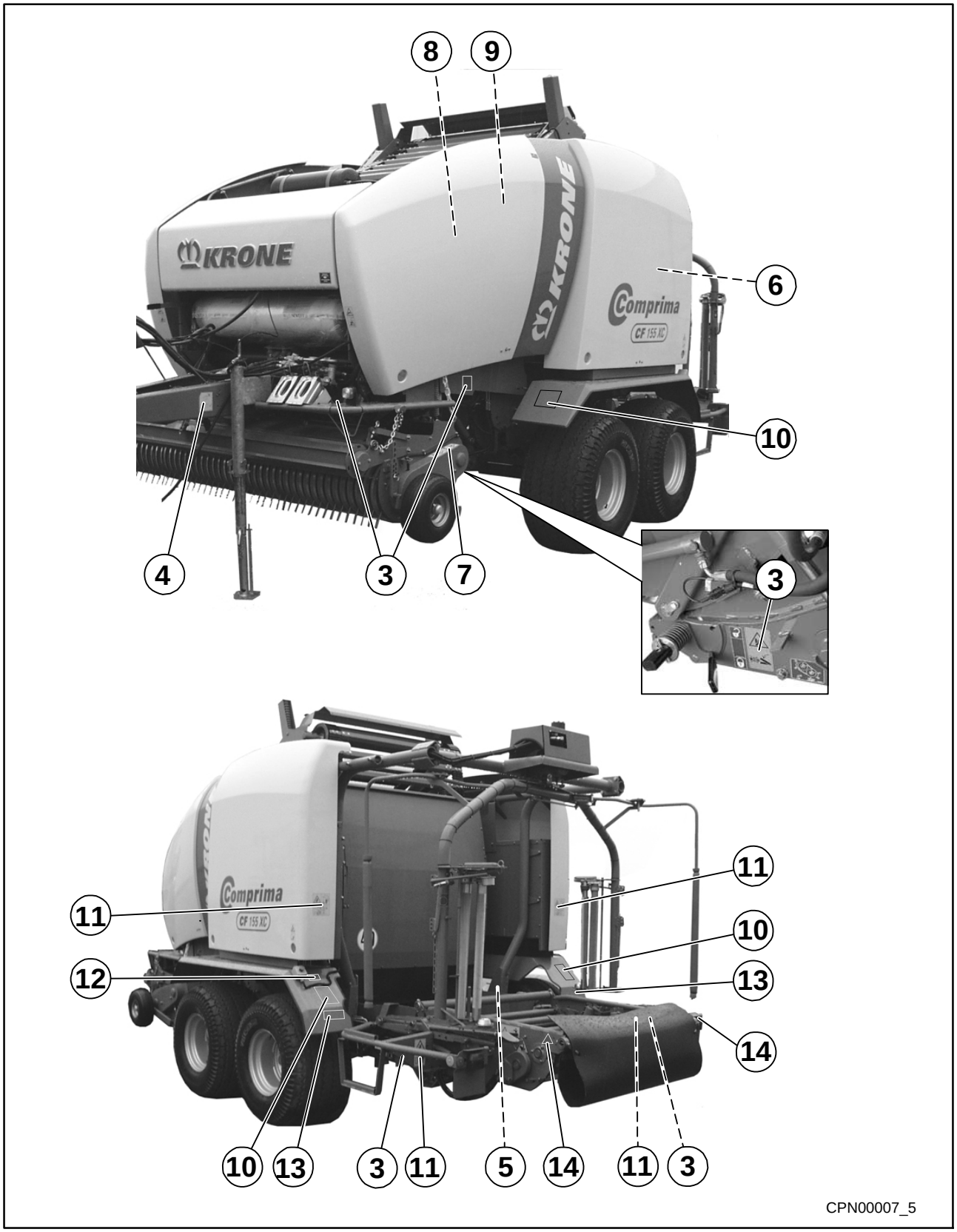


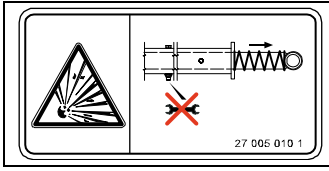
Fig. 2

5) Order No. 939 125 1 (3x) H = 100 mm

	Danger from sharp blades. There is a risk of cuts when reaching into the danger zone of the blades. • Wear cut-resistant gloves.

6) Order no. 27 005 010 1 (2x)

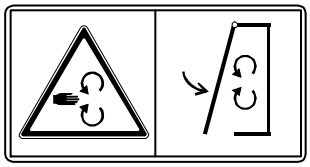
Comprima CF 155 XC

	**Danger from energised spring** Risk of injury due to ejected machine parts. • Never unscrew screw connection.

7) Order No. 939 520 1 (2x)

	Danger due to rotating auger. There is a danger of becoming caught or wrapped around the rotating auger. • Never reach into the rotating auger. • Keep a sufficient distance from moving machine parts.

8) Order No. 942 002 4 (6x)

	**Danger due to rotating machine parts.** When the machine is running, there is a risk of injury due to rotating machine parts. • Before starting up, move the guards into their protective position.

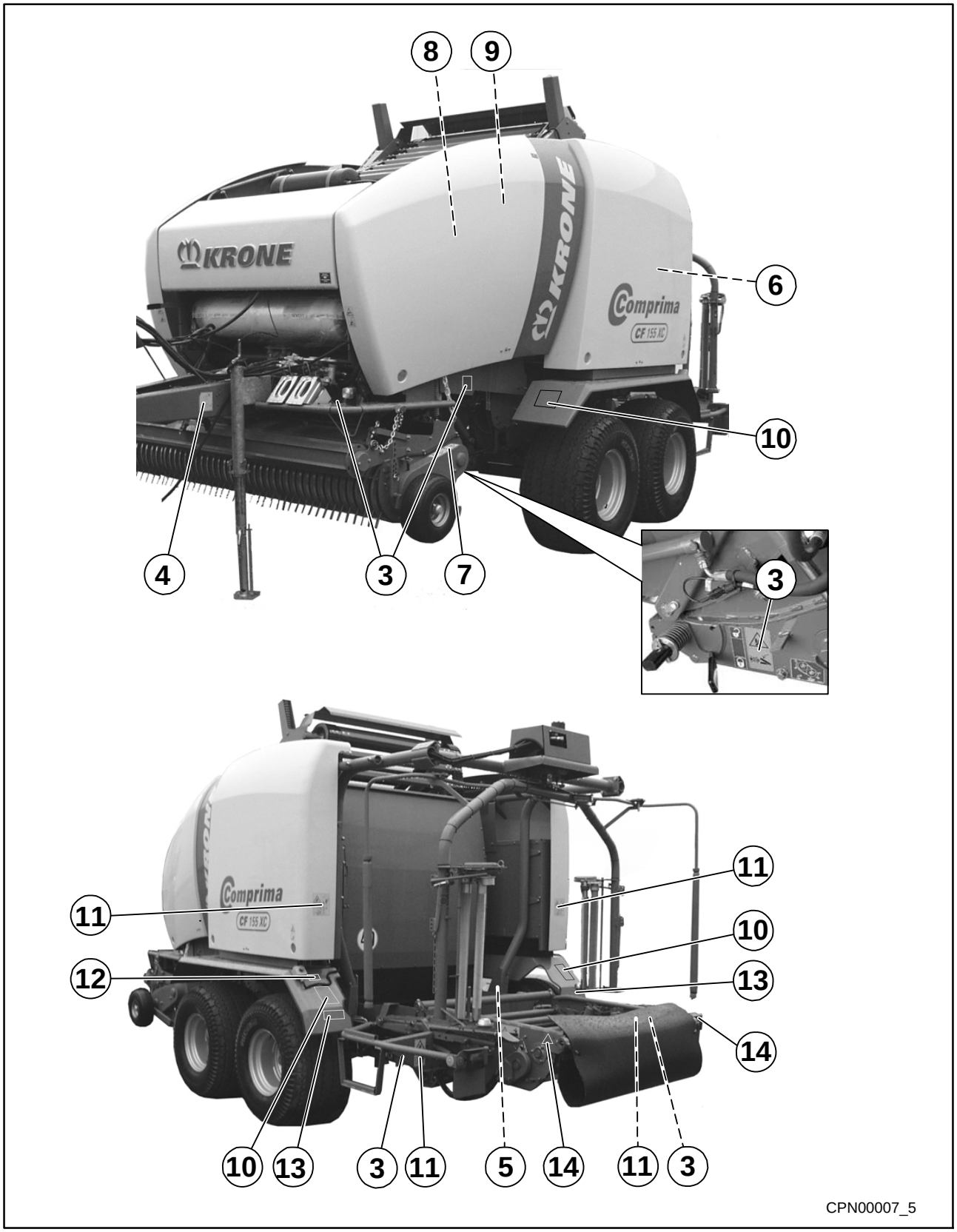
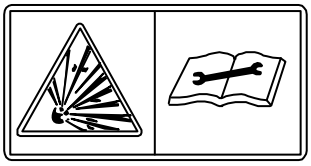


Fig. 3

9) Order no. 939 529 0 (1x)

Comprima CV 150 XC

	**Danger due to high-pressure liquid.** The accumulator is under gas and oil pressure. If the accumulator is not removed or repaired properly, there is a risk of injury. • Before removing and repairing the accumulator, follow the information in the operating instructions. • The accumulator may be removed and repaired by a service centre only.

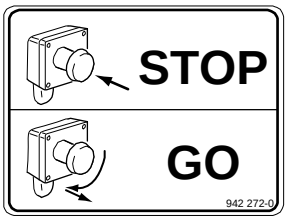
10) Order No. 27 003 995 0 (3x)

	Danger from tailgate as it may close in an uncontrolled manner. • Staying in the danger zone is only permitted when the lifting cylinder safety mechanism is engaged.

11) Order No. 942 235 0 (4x)

	Danger from shock The swivelling movement of the machine may cause danger to life. • Make sure that there is no one in the swivel range of the machine. • Keep distance to moving machine parts.

12) Order No. 942 272 0 (1x)

	**Danger from rotating machine parts.** Rotating machine parts in the range of movement of the wrapping device represent a risk of injury. • Actuate quick stop button in order to interrupt all wrapping device functions.

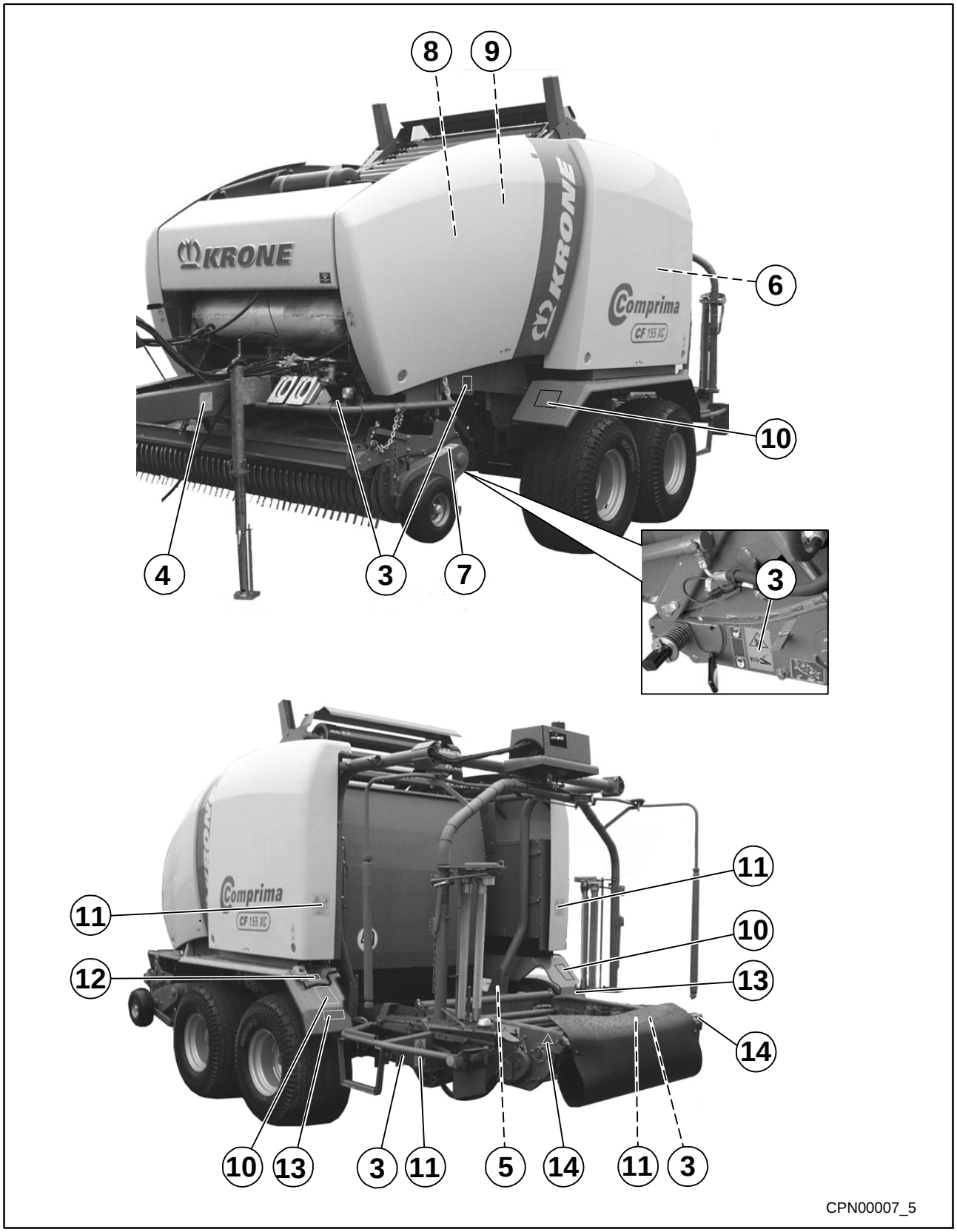
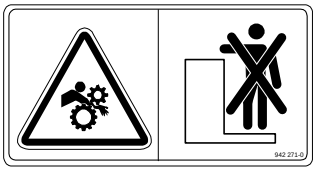


Fig. 4

13) Order No. 942 271 0 (2x)

	**Danger from rotating machine parts.** When getting on the machine while the PTO shaft is running, there is a danger of being pulled in due to rotating machine parts. • Switch off PTO shaft and engine before getting on the machine.

14) Order No. 27 007 502 0 (2x) H = 70 mm

	Danger from sharp blades. There is a risk of cuts when reaching into the danger zone of the blades. • Wear cut-resistant gloves.

Comprima CV 210 XC

Fig. 5

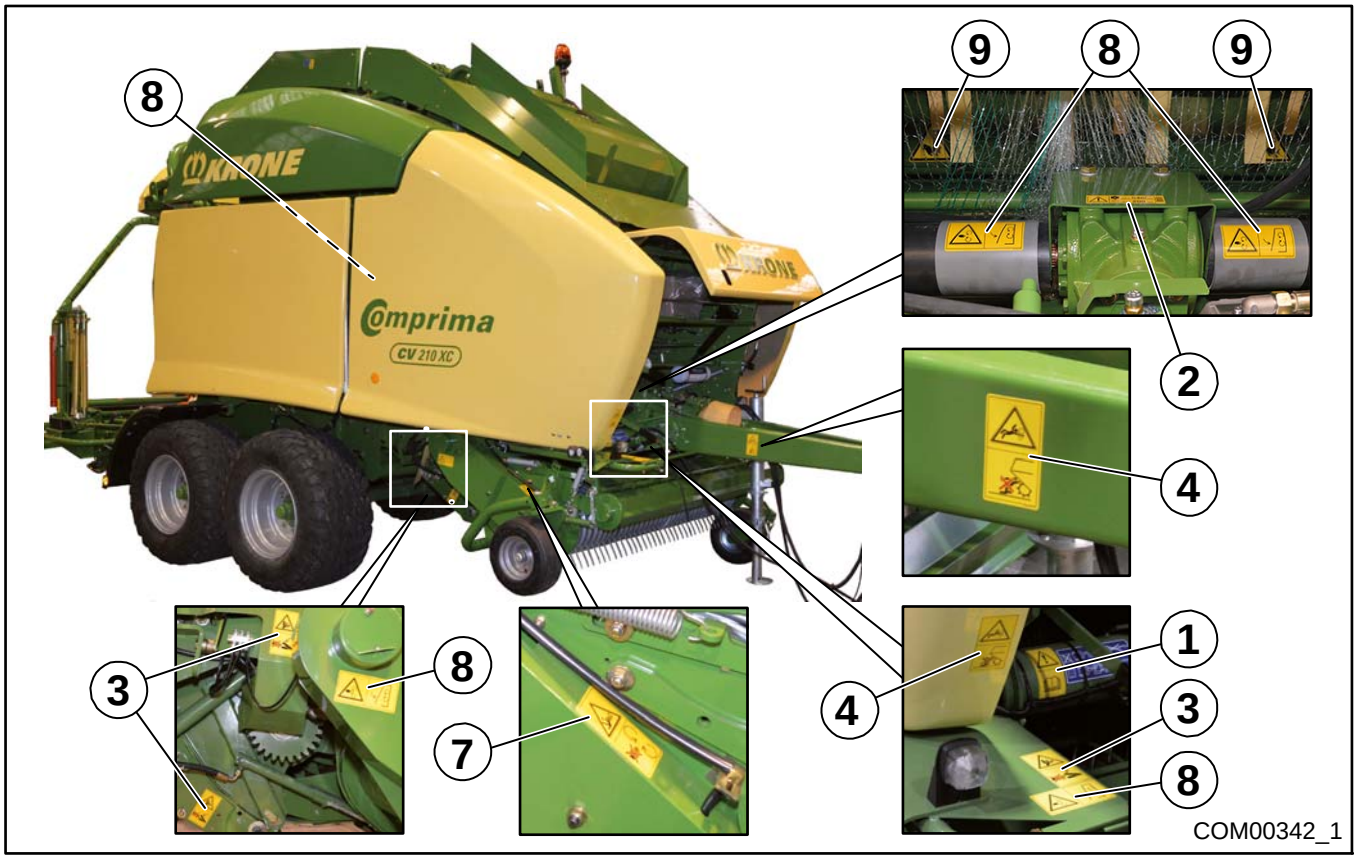
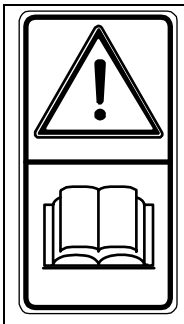
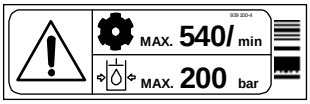


Fig. 6

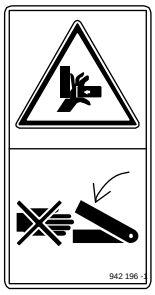
1) Order no. 939 471 1 (1x)

	**Danger due to incorrect operation and lack of knowledge** Incorrect operation and lack of knowledge of the machine as well as incorrect behaviour in hazardous situations is risking the life of the operator and third parties. • Before starting up the machine, read and follow the operating instructions and safety instructions.

2) Order no. 939 100 4 (1x)

	**Danger if the maximum permitted PTO speed or the maximum permitted operating pressure is exceeded.** If the maximum permitted PTO speed is exceed, parts of the machine may be destroyed or forcibly ejected. If the maximum permitted operating pressure is exceeded, hydraulic parts may be damaged. As a result, people may be receive serious or life threatening injuries. • Observe the permitted PTO speed. • Observe the permitted operating pressure.

3) Order No. 942 196 1 (8x)

	**Danger due to crushing or shearing** Risk of injury due to crushing or shearing points on moving machine parts. • While parts are moving, never reach into areas where there is a risk of being crushed.

4) Order No. 939 407 1 (4x)

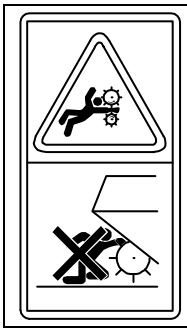
	**Danger due to rotating pick-up.** There is a danger of being drawn in if you approach the danger zone and if you use your hands or feet to clear clogging. • Before working on the pick-up, switch off the PTO shaft and the engine.

Fig. 7

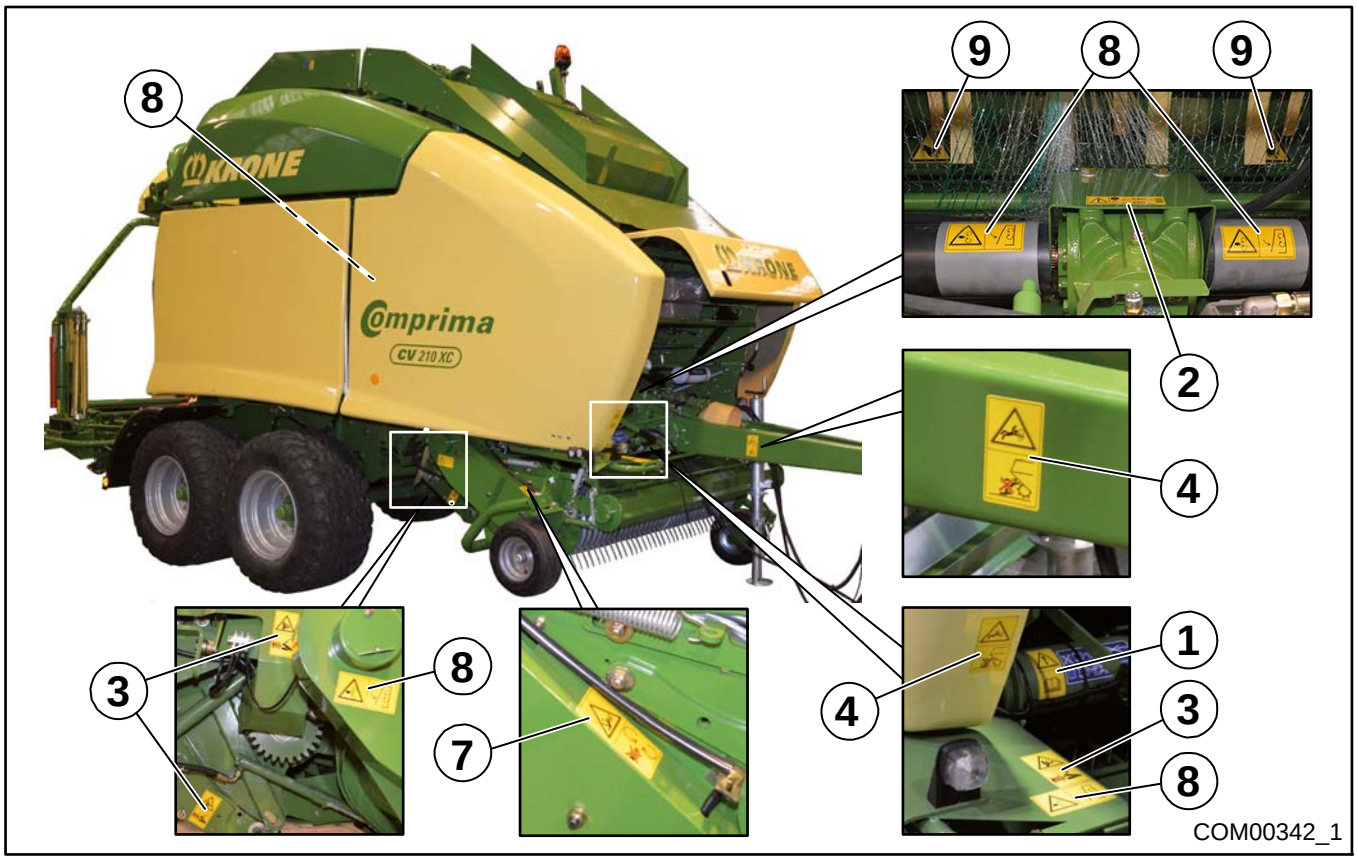
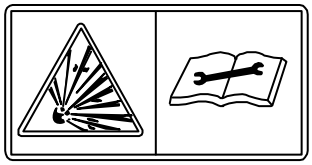


Fig. 8

5) Order no. 939 529 0 (1x)



Danger due to high-pressure liquid.

The accumulator is under gas and oil pressure. If the accumulator is not removed or repaired properly, there is a risk of injury.

- Before removing and repairing the accumulator, follow the information in the operating instructions.
- The accumulator may be removed and repaired by a service centre only.

6) Order No. 27 003 995 0 (2x)

Danger from tailgate as it may close in an uncontrolled manner.

- Staying in the danger zone is only permitted when the lifting cylinder safety mechanism is engaged.

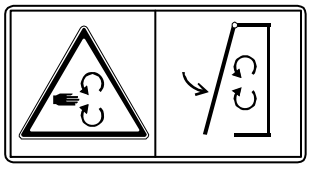
7) Order No. 939 520 1 (2x)

Danger due to rotating auger.

There is a danger of becoming caught or wrapped around the rotating auger.

- Never reach into the rotating auger.
- Keep a sufficient distance from moving machine parts.

8) Order No. 942 002 4 (6x)



Danger due to rotating machine parts.

When the machine is running, there is a risk of injury due to rotating machine parts.

- Before starting up, move the guards into their protective position.

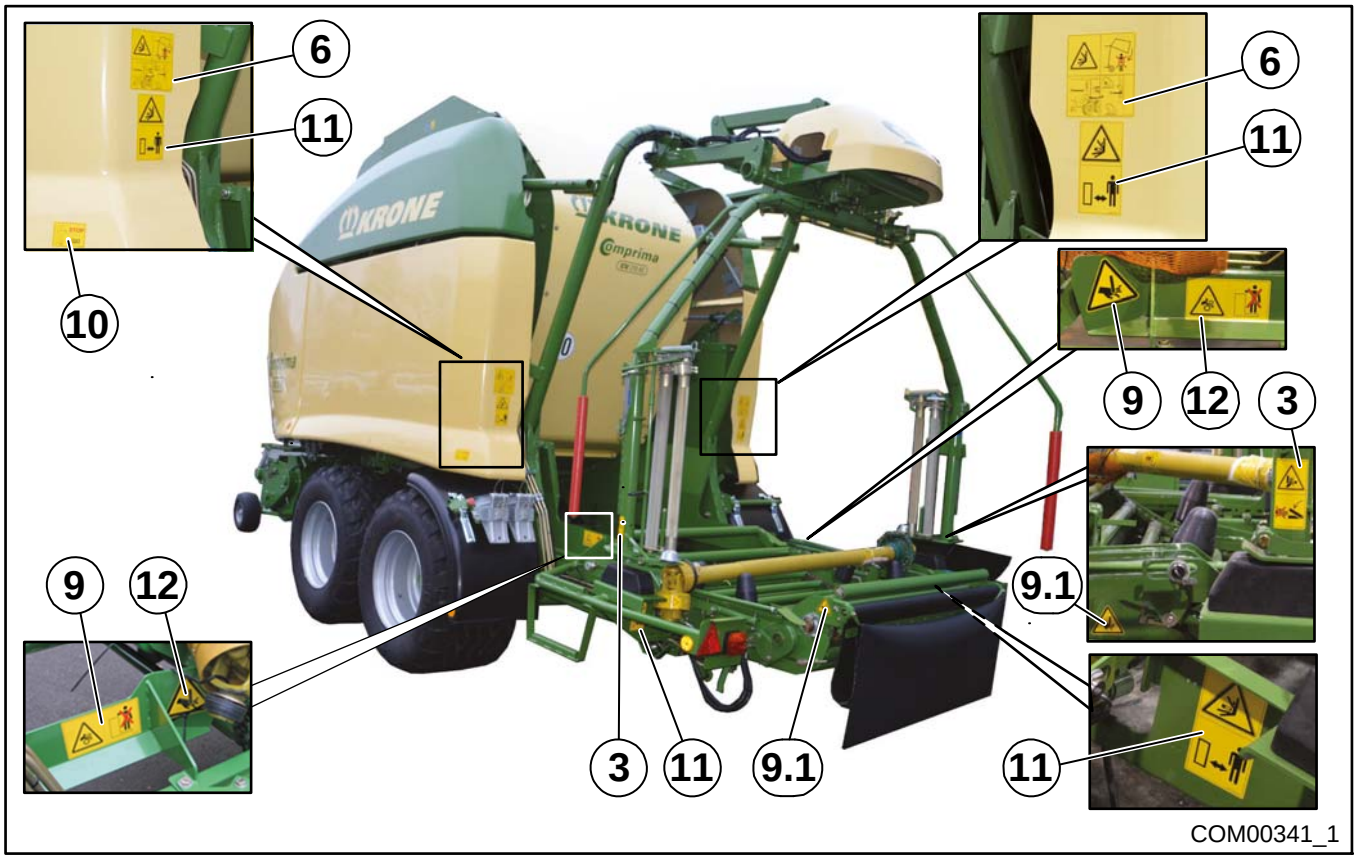


Fig. 9

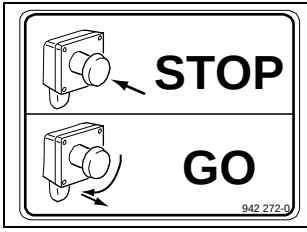
9) Order No. 939 125 1 (4x) H = 100 mm

Danger from sharp blades.

There is a risk of cuts when reaching into the danger zone of the blades.

- Wear cut-resistant gloves.

10) Order No. 942 272 0 (1x)

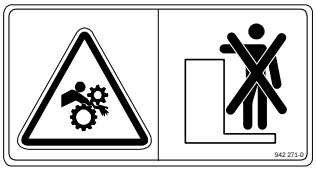


Danger from rotating machine parts.

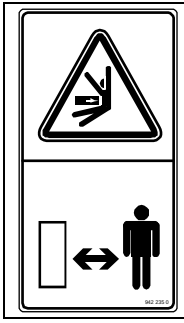
Rotating machine parts in the range of movement of the wrapping device represent a risk of injury.

- Actuate quick stop button in order to interrupt all wrapping device functions.

11) Order No. 942 271 0 (2x)

	**Danger from rotating machine parts.** When getting on the machine while the PTO shaft is running, there is a danger of being pulled in due to rotating machine parts. • Switch off PTO shaft and engine before getting on the machine.

12) Order No. 942 235 0 (4x)

	**Danger from shock** The swivelling movement of the machine may cause danger to life. • Make sure that there is no one in the swivel range of the machine. • Keep distance to moving machine parts.

13) Order No. 27 007 502 0 (2x) H = 70 mm

	Danger from sharp blades. There is a risk of cuts when reaching into the danger zone of the blades. • Wear cut-resistant gloves.

4.6.1 Re-Ordering the Adhesive Safety and Information Labels

Note

Every adhesive safety and information label is assigned an order number and can be ordered directly from the manufacturer or from an authorized dealer (see Section "Contact").

4.6.2 Affixing the Adhesive Safety and Information Labels

Note - Affixing an adhesive label

Effect: Adhesion of the label

- The surface for affixing the adhesive label must be clean and free of dirt, oil and grease.

4.6.3 Contact

Maschinenfabrik Bernard Krone GmbH
Heinrich-Krone-Strasse 10
D-48480 Spelle (Germany)

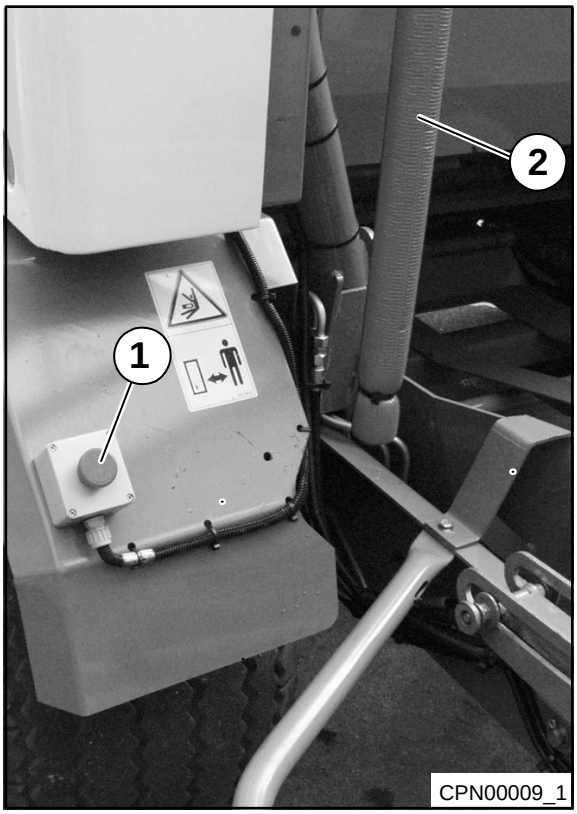
Telephone: + 49 (0) 59 77/935-0 (Head Office)
Fax.: + 49 (0) 59 77/935-339 (Head Office)
Fax.: + 49 (0) 59 77/935-239 (Spare parts - domestic)
Fax.: + 49 (0) 59 77/935-359 (Spare parts - export)
Email: info.ldm@krone.de

4.7 Safety Equipment

WARNING! - Unexpected movement of components due to defective safety equipment!
Effect: Danger to life, risk of a serious accident or damage to the machine

- Machine must not be started without functioning safety equipment.

Comprima CF 155 XC/Comprima CV 150 XC



Comprima CV 210 XC

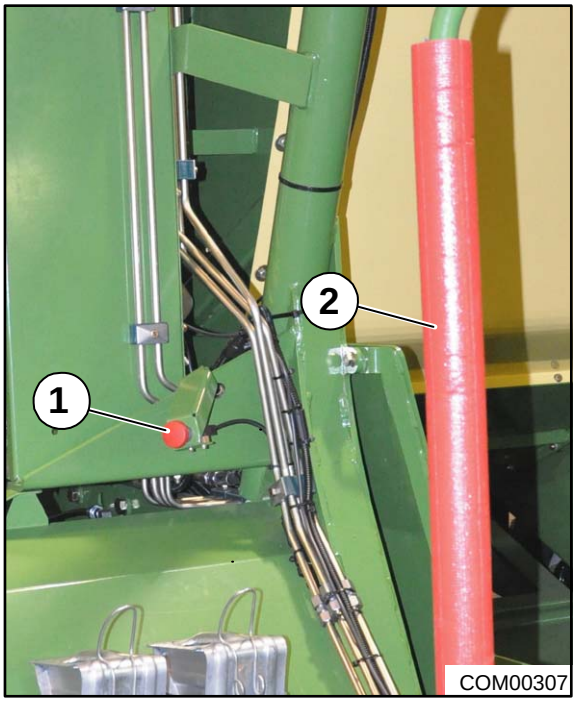


Fig. 10

Note
Check the safety equipment for functionality prior to every start-up.

Note
If an alarm message is displayed on the terminal when testing the function of the safety equipment, the function is provided. If an alarm message is not displayed, check and repair the safety equipment.

Before starting up the machine, check that the safety equipment of the bale wrapper functions:

- Switch on the terminal.
- Press the quick-stop switch (1) and check whether an alarm message is displayed on the terminal. Acknowledge the error on the terminal.
- Press the right bracket (2) and check whether an alarm message is displayed on the terminal. Acknowledge the error on the terminal.
- Press the left bracket (2) and check whether an alarm message is displayed on the terminal. Acknowledge the error on the terminal.

Alarm messages see Section "KRONE ISOBUS Terminal".

4.7.1 Parking brake

(Optional)

WARNING!

Unexpected movement of the machine!

The machine may move unintentionally if the parking brake is not activated when parking the machine. Thus there is a risk of serious injuries or death.

- Always apply the parking brake when the tractor is left or the machine is switched off.

The parking brake (1) is located on the front side of the machine on the drawbar.

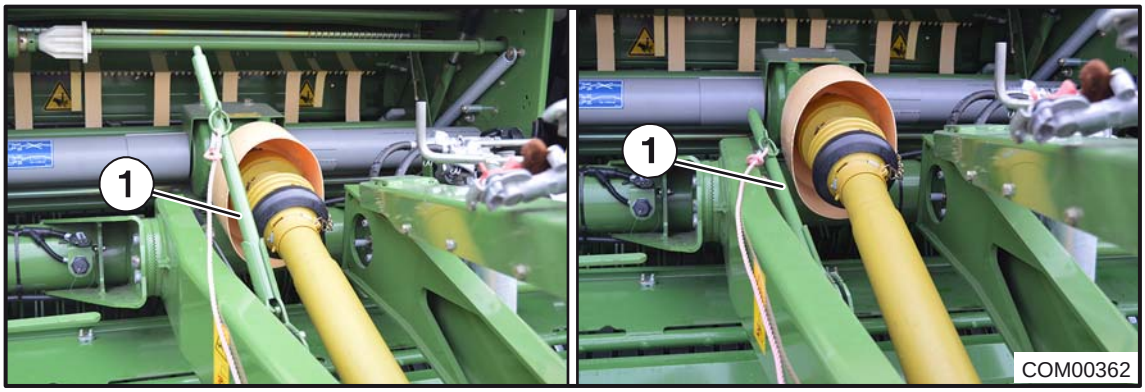


Fig. 11

a) Parking brake applied b) Parking brake released

The parking brake is used to secure the machine from rolling away accidentally, especially when the machine is disconnected from the tractor.

To apply the parking brake:

- Press button on the end of the lever and pull lever (1) up as far as it will go.

To release the parking brake:

- Press the button on the end of the lever and push down lever (1) as far as it will go.

Note

To prevent the machine from rolling away, use the wheel chocks in addition to the parking brake.

4.7.2 Attaching the safety cable

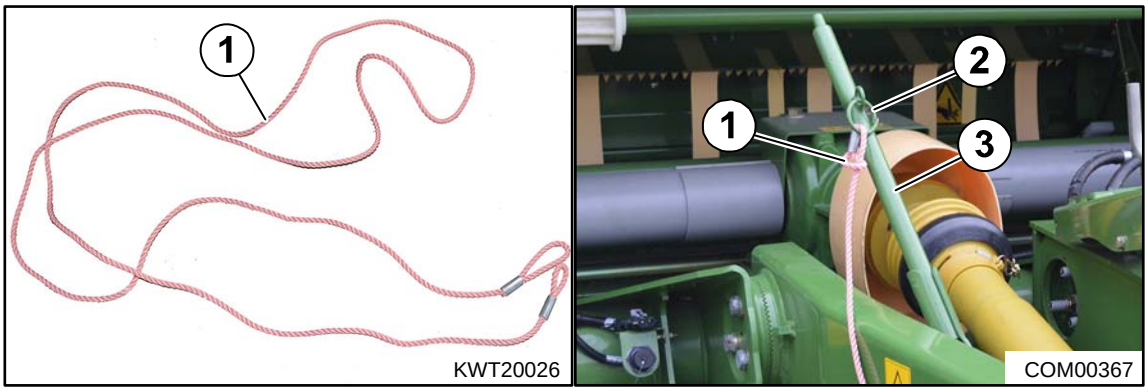


Fig. 12

The safety cable (1) applies the parking brake (3) if the machine breaks away from the tractor while it is driving.

Attaching the safety cable to the machine:

- Attach the safety cable to the parking brake. To do this, pull the safety cable through the small loop on the cable and through the ring (2).

Attaching the safety cable to the tractor:

- Attach the other end of the safety cable to a suitable point at the rear of the tractor. Make sure that the cable cannot slip or become detached.

4.7.3 Wheel chocks

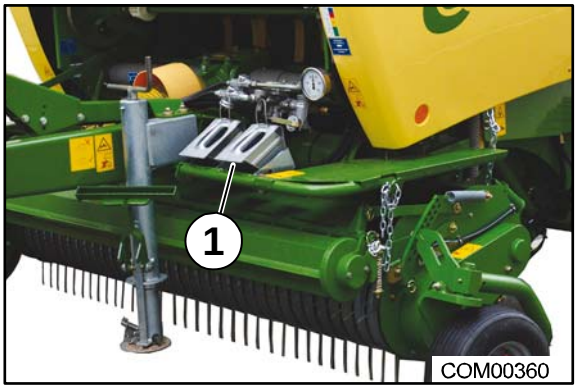


Fig. 13

The wheel chocks (1) are kept in a holder at the front left beside the drawbar. Each one is locked in position in the holder by a spring clip.

4.7.4 Secure the machine against the possibility of rolling back.

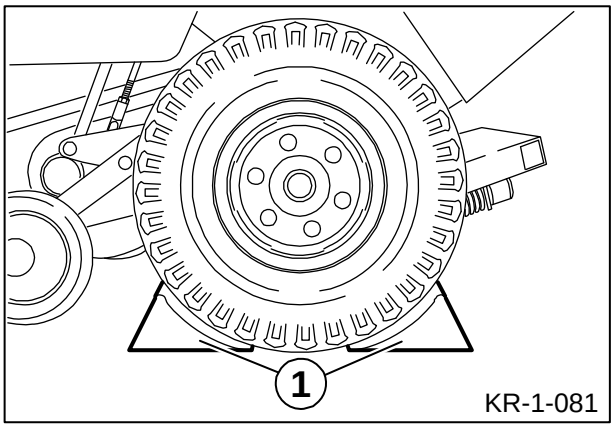


Fig. 14

- To prevent the disconnected machine from rolling back, lay wheel chocks (1) in front of and behind the same wheel.

Note
On machines with coaster/steering axle, make sure that a wheel on the front axle is secured.

4.7.5 Stop Points

WARNING!
Danger from falling loads!
- Never step or stay under suspended loads!
- Maintain an adequate safety distance from suspended loads.
- Before transportation, compare load capacity of slings and cranes and choose transportation equipment with a sufficient degree of safety and lifting capacity.
- Prevent strong impacts and make sure that the machine does not become wedged!

4.7.6 Lifting Eyes

The machine is equipped with four suspension points:
- Two suspension points are located right and left on the top on the frame of the wrapping mechanism
- Two suspension points are located next to the floor conveyor (right and left upper machine side)

4.7.7 Raise

- Use a lifting traverse with a minimum load-bearing capacity (depending on the permitted gross weight of the machine) (refer to Chapter entitled Introduction “Identification”)
- Close the tailgate
- Swivel the parking support (parking jack) into transport position
- Lift the pick-up
- Make sure that all safety devices are locked
- Attach the chains of the lifting traverse to the four suspension points of the presse
- Make sure that the hooks of the chains are attached correctly to the suspension points

4.7.8 Parking Support

The parking support ensures that the machine is stable when it is not hitched to the tractor.

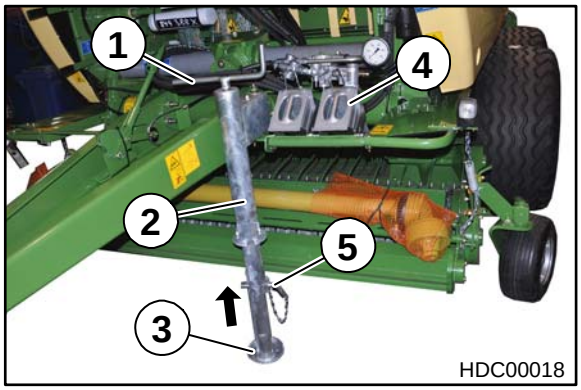


Fig. 15

Note
Risk of hands and feet when the parking support is actuated!

To raise the parking support:

- As soon as the machine is connected to the tractor, turn the crank (1) several revolutions clockwise until there is no more weight on the parking jack (3).
- Withdraw the locking bolt (5) on the lower part of the parking support (2), push in the parking support (2) and secure it in position with the locking bolt (5).
- Then crank the parking support (2) up all the way.
- Turn the parking jack (3) so that the flat side is facing the pick-up.

4.7.9 Lowering the Parking Support

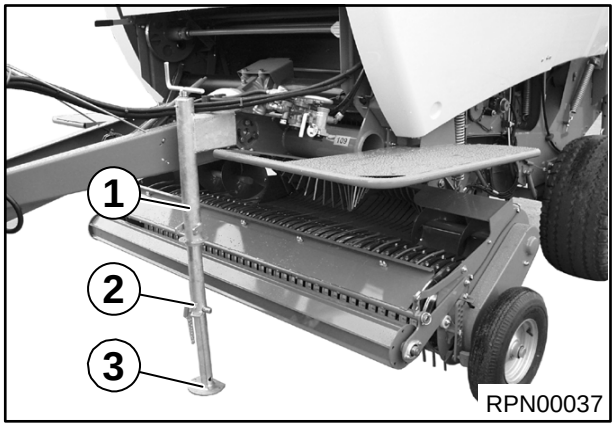


Fig. 16

- Turn the crank on the parking support several rotations anticlockwise.
- Remove stake bolt (2), bring the support pipe out of the parking support (1) and then secure again with the stake bolt (2).
- Crank the support plate (3) tightly onto the ground until pressure on the drawbar has been relieved.

Note
In order to increase the base of the support jack when the ground is soft, use a suitable support.

4.7.10 Shut-off valve for tailgate

WARNING! – Settings on the machine!
Danger to life or serious injuries.
- The shut-off valve on the left hydraulic cylinder must be closed.

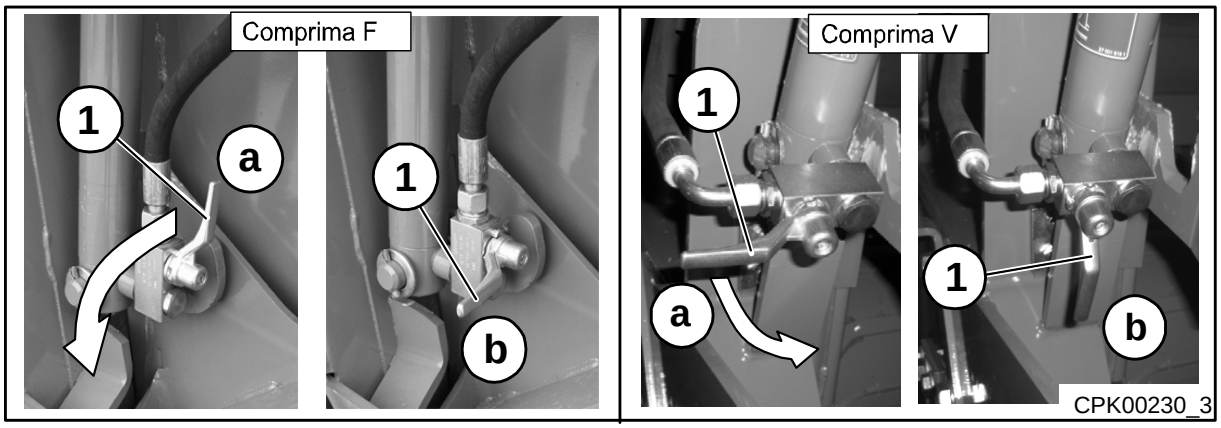


Fig. 17

The tractor supplies pressure to the machine hydraulics via hoses. In addition to different parts, the shut-off valve (1) on the left hydraulic cylinder should particularly be mentioned.
It is presented as a safety part which prevents unintended closing of the tailgate.

Position "a"
Hydraulic cylinder return is opened. The tailgate can be closed.
Always reset the shut-off valve after working in the bale chamber or on the tailgate to position **“a”** to be able to close the tailgate.

Position "b"
The hydraulic cylinder return is locked. The tailgate cannot be closed.
Move the shut-off valve always to position **“b”** when working in the bale chamber or on the open tailgate.

4.7.11 Step for working on the linkage

WARNING!

Risk of injury when climbing up and down.

People who behave carelessly when climbing up and down may fall off the ladder. People, who climb onto the machine without using the designated ladders, may slip, fall and seriously injure themselves. Dirt as well as operating fluids and lubricants may cause you to lose your footing.

- Use the designated ladders only.
- Always keep the steps and platforms clean and in a proper condition to prevent people from losing their footing.
- Never climb up and down while the machine is moving.
- Face the machine when climbing up and down.
- When climbing up and down, never use the control elements as handles. Inadvertent activation of the control elements may cause functions to be unintentionally actuated which could be hazardous.
- When climbing down, never jump off the machine.

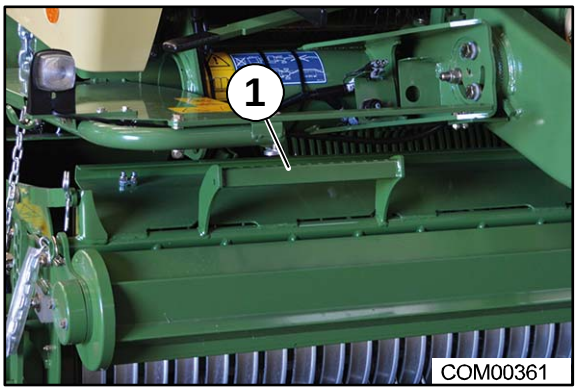


Fig. 18

Attached to the right-hand side of the machine at the front above the roller crop guide is a step (1) that allows easier access to the linkage and the supply of binding material.

4.7.12 Rollers on the Wrapping Table

WARNING!

Risk of injury due to moving rollers on the wrapping table!

There is an increased risk of accident when entering the yellow painted (moveable) rollers of the wrapping table.

- For repair, maintenance and cleaning jobs as well as when remedy malfunctions, only step on the areas of the wrapping table painted in green.

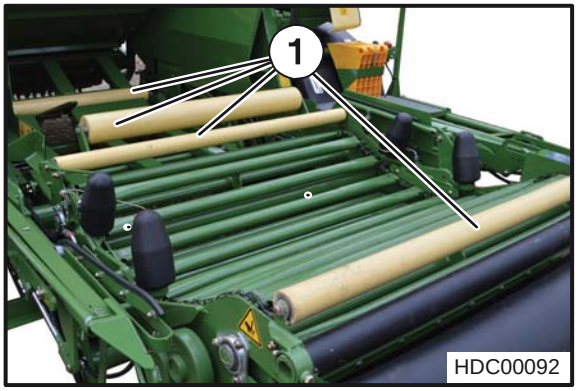


Fig. 19

- When performing work on the wrapping table, do not walk on the yellow painted (1) movable rollers (1).

4.7.13 Platform on the Wrapping Table

Comprima CV210 (XC)

WARNING!

Danger of injury when climbing or descending.

Persons who behave carelessly when getting on and off the machine may fall down from the ladder. Persons getting on the machine without using the ladders intended for that purpose may slip or fall or they may get hurt seriously. Dirt as well as operating fluids and lubricants may impair surefootedness and stability.

- Just use ladders intended for this purpose.
- Always keep ladder steps and platforms clean and in proper condition so that you can step and stay safely.
- Do not get on and off when the machine is moving.
- Always get on and off with the face towards the machine.
- When getting on and off, ensure three-point contact with steps and handrails (both hands and one foot are in contact with the machine or both foots and one hand).
- When getting on and off the machine, never use control elements as a handle. An accidental activation of control elements may cause functions to be activated unintentionally. This holds a danger.
- When getting off the machine, never jump.

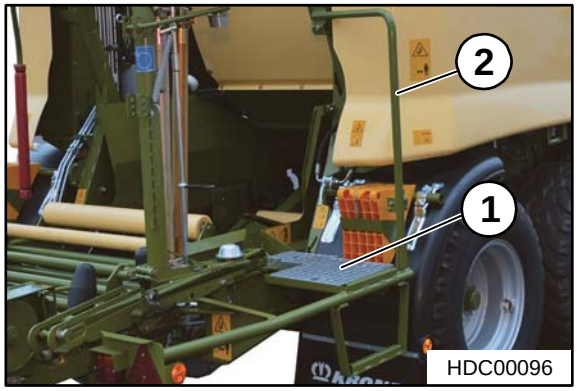


Fig. 20

There is a ladder (1) with handrail (2) on the right-hand side of the machine next to the wrapping table. This ladder can be used to perform maintenance work in the bale chamber.

WARNING! - Risk of injury in case of falling down from the ladder!

Falling from the ladder may cause injuries.

- Always use handrail when climbing or descending.
- Do not climb up or down the ladder while the vehicle is moving.

4.8 Identification Plate

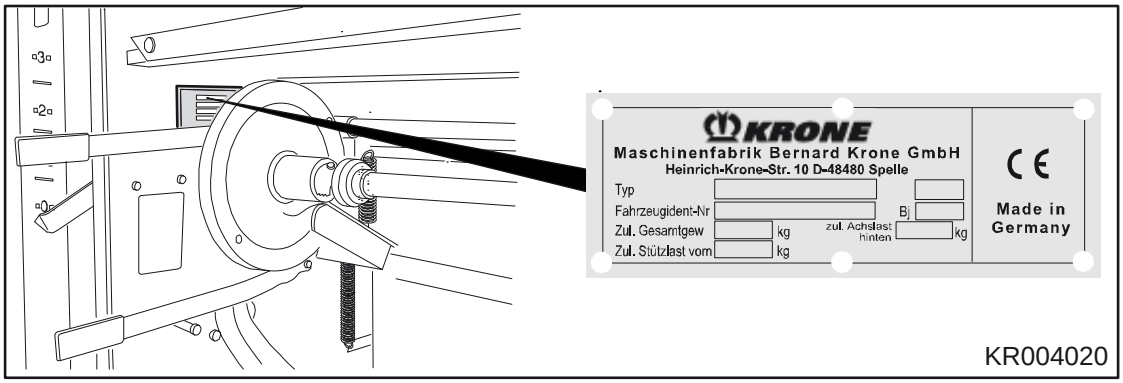


Fig. 21

The machine data are located on the type plate (1), which is located on the right-hand side of the machine below the twine box.

4.9 Information Required for Questions and Orders

Type	
Year of manufacture	
Vehicle ID number	

Note

The entire identification plate represents a legal document and should not be altered or rendered illegible!

When asking questions concerning the machine or ordering spare parts, be sure to provide type designation, vehicle ID number and the year of manufacture : To ensure that these data are always available, we recommend that you enter them in the fields above.

Note

Authentic KRONE spare parts and accessories authorised by the manufacturer help to ensure safety. The use of spare parts, accessories and other devices which are not manufactured, tested or approved by KRONE will result in the revoking of the liability for damages resulting thereof.

4.10 Technical data

All information, illustrations and technical data in these operating instructions correspond to the latest state at the time of publication. We reserve the right to make design changes at any time and without notification of reasons.

		Comprima CF155 XC
Axle		Tandem axle (axle base 1100)
Permissible weights		see information listed on the identification plate
Pick-up width		2150 mm
Width approx.		2950 mm
Track width		2455 mm
Tyres		500/50-17 10 PR 500/55-20 12 PR
Length approx.		6578 mm
Height approx.		3410 mm
Bale dimensions	Diameter approx.	1250 - 1500 mm
	Width approx.	1200 mm
Power requirement approx.		51 kW (70 PS)
Drive speed (PTO shaft)		540 r.p.m.
max. permissible operating pressure of hydraulic system		200 bar
max. oil temperature		80°C
Delivery rate hydraulics		min. 30 l/min max. 60 l/min
Electr. connections	Lighting	12 volt – 7-pole connector
	Operation	12 volt – 3-pole connector
Net	max. Width	1300 mm
	Sleeve length	1250 - 1350 mm
	Sleeve diameter	ø 75 - 80 mm
	Roll diameter	max. 310 mm (3000 m roll)
Sheet	Width	2 x 750 mm (500 mm also possible)
	Pre-stretch	50% or 70%
	Sleeve diameter	ø 75 - 80 mm
	Roll diameter	max. 260 mm
Overload protection system (universal shaft) Cam-type clutch 540 rpm		1950 Nm (17 blades) 2300 Nm (26 blades)

Hydraulic Connections	
Raising/lowering the pick-up or blade base	1 x single-action control unit

		Comprima CV150 XC
Axle		Tandem axle (axle base 1100)
Permissible weights		see information listed on the identification plate
Pick-up width		2150 mm
Width approx.		2960 mm
Track width		2455 mm
Tyres		500/50-17 10 PR 500/55-20 12 PR
Length approx.		7239 mm
Height approx.		3080 mm
Bale dimensions	Diameter approx.	1000 - 1500 mm
	Width approx.	1200 mm
Power requirement approx.		51 kW (70 PS)
Drive speed (PTO shaft)		540 r.p.m.
Max. permissible operating pressure of hydraulic system		200 bar
max. Oil temperature		80°C
Delivery rate hydraulics		min. 30 l/min max. 60 l/min
Electr. connections	Lighting	12 volt – 7-pole connector
	Operation	12 volt – 3-pole connector
Net	max. Width	1300 mm
	Sleeve length	1250 - 1330 mm
	Sleeve diameter	ø 75 - 80 mm
	Roll diameter	max. 310 mm (3000 m roll)
Sheet	Width	2 x 750 mm (500 mm also possible)
	Pre-stretch	50% or 70%
	Sleeve diameter	ø 75 - 80 mm
	Roll diameter	max. 260 mm
Overload protection system (universal shaft) Cam-type clutch 540 rpm		1950 Nm (17 blades) 2300 Nm (26 blades)

Hydraulic Connections	
Raising/lowering the pick-up or blade base	1 x single-action control unit

		Comprima CV210 XC
Axle		Tandem axle (axle base 1150)
Pick-up (width)		2150 mm
Permissible weights		see information listed on the identification plate
Track width		2370 mm
Tyres		620/40-R 22.5
		500/55-20/12 PR
Length approx.		7557 mm
Height approx. (depending on tyres)		3629 mm
Width approx. (depending on tyres)		2990 mm
Bale dimensions	Diameter approx.	1000 mm (Wrapping to 1750 mm diameter and a bale weight of 1600 kg at most)
	Width approx.	1200 mm
Power requirement approx.		74 kW (100 PS)
Drive speed (PTO shaft)		540 r.p.m.
Max. permissible operating pressure of hydraulic system		min. 150 bar max. 200 bar
Minimum oil quality		Oil ISO VG 46
max. oil temperature		80°C
Delivery rate hydraulics		min. 30 l/min max. 60 l/min
Electr. connections	Lighting	12 volt – 7-pin plug
	Operation	12 volt - 3-pin connector (DIN 9680)
Net	Width	max. 1300 mm
	Sleeve length	1250 - 1350 mm
	Sleeve diameter	75 - 80 mm
	Roll diameter	max. 310 mm (3000 m roll)
Sheet	Width	2x750 mm (500 mm also possible)
	Pre-stretch	50 % or 70 %
	Sleeve diameter	75 - 80 mm
	Roll diameter	max. 260 mm
Overload protection system (universal shaft) Cam-type clutch (540 r.p.m.)		2300 Nm (17 blades) 2300 Nm (26 blades)

Hydraulic Connections	
Raising/lowering the pick-up or blade base	1 x single-action control unit
For design with hydraulic support jack	1 x double-action control unit
For design with hydraulic knife selection	1 x double-action control unit

5 Commissioning

WARNING!

Risk of accident or damage to the machine due to an incorrect initial operation!

Only an authorized service technician is permitted to carry out the initial operation.

WARNING!

If the basic safety instructions are not followed, people may be seriously injured or killed.

- To avoid accidents, the basic safety instructions in the chapter Safety must have been read and followed, see chapter Safety "Basic safety instructions".

WARNING!

If the safety routines are not adhered to, people may be seriously injured or killed.

- To avoid accidents, the safety routines in the chapter Safety must be read and followed, see chapter Safety "Safety routines".

WARNING!

Risk of injury due to the unsecured machine rolling away!

If the machine is not secured against rolling away when it has been switched off, there is a risk of people being injured by the machine rolling away in an uncontrolled manner.

- Secure the machine against rolling away with the parking brake and wheel chocks.

5.1 Before initial start-up

For reasons related to transport, the machine is delivered without the PTO shaft and bale ejector. Before initial start-up, the machine must be completely assembled and adjusted to the tractor type.

The following parts are included loose with delivery in some cases.

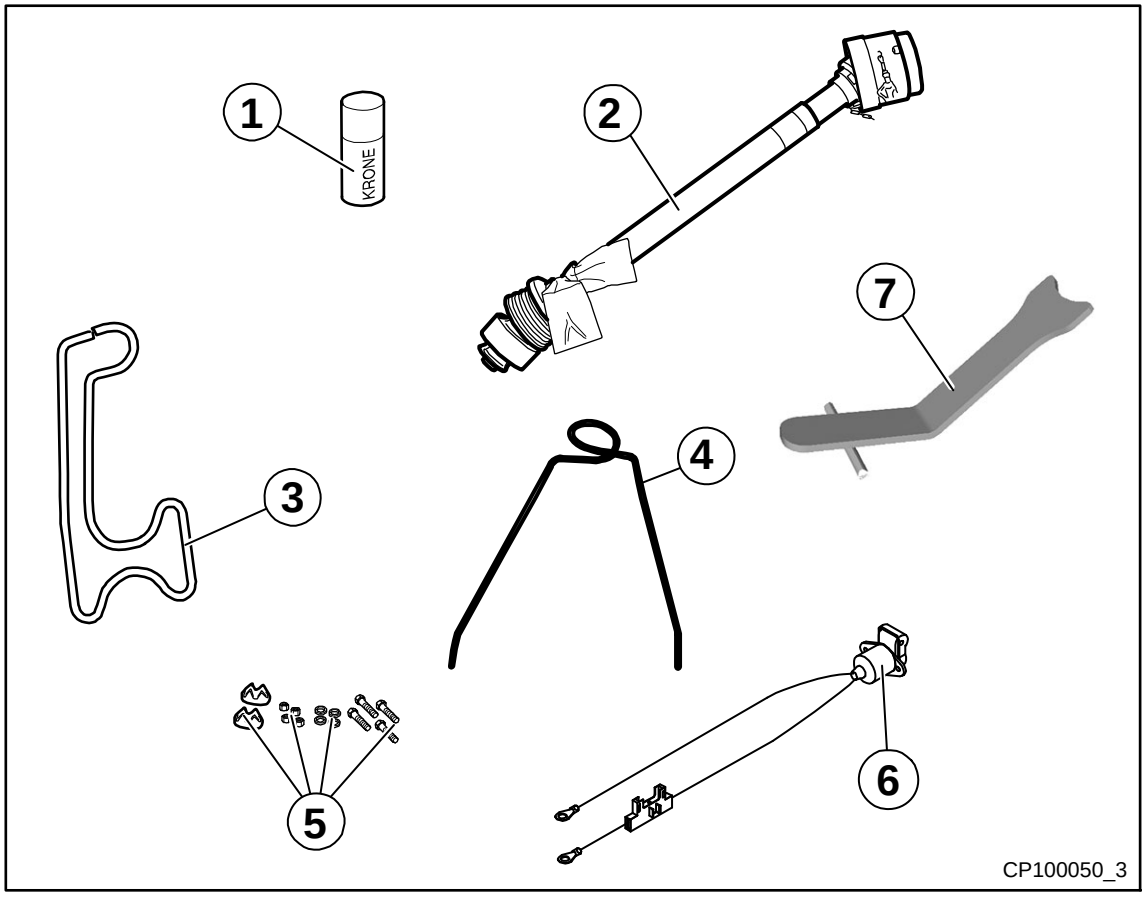


Fig. 22

Pos.	Designation	Storage location
1	Can of spray paint	Twine box
2	Universal shaft	Wrapping table
3	Universal shaft support	Twine box
4	Hose support and cable support	Bale chamber
5	Fastening material	Twine box
6	Power supply on the tractor	Twine box
7	Universal shaft bracket for Comprima CV 210	Twine box
without fig.	Control unit (depending on the version)	Twine box
without fig.	Extension cable	Twine box
without fig.	Ring spanner 13	Twine box

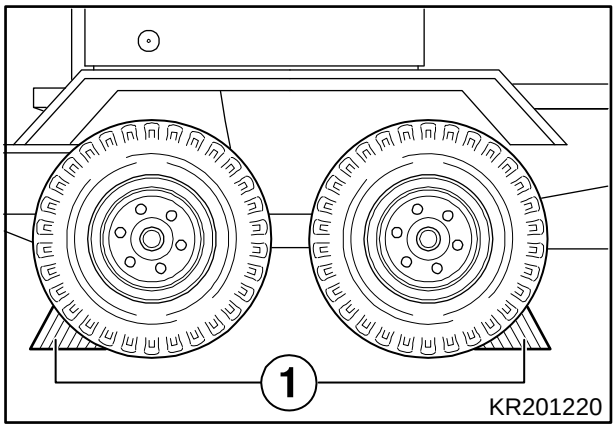


Fig.23

- Park the machine on firm, level ground.
- Place two wheel chocks (1) under the wheels to prevent the machine from rolling away.

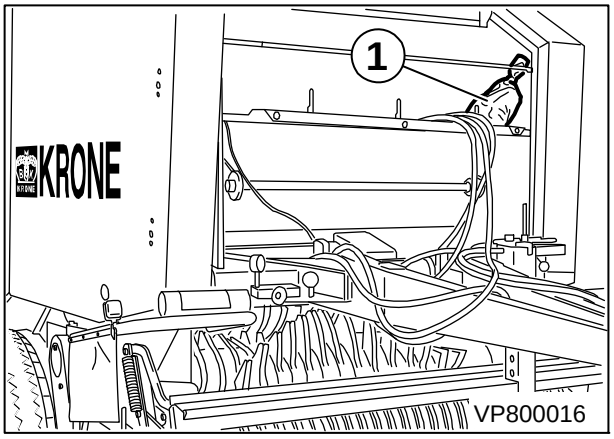


Fig.24

- Take the bag with the small parts (1) out of the twine box.

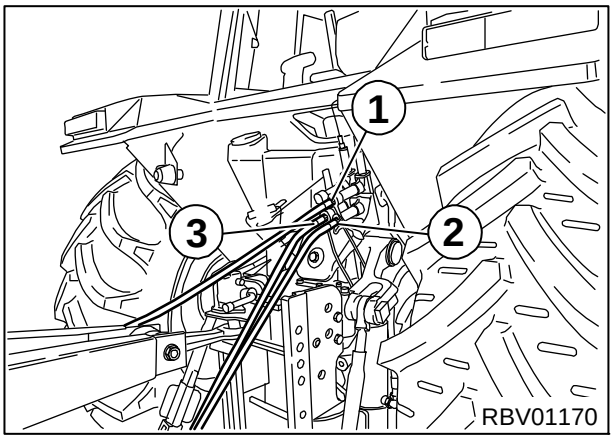
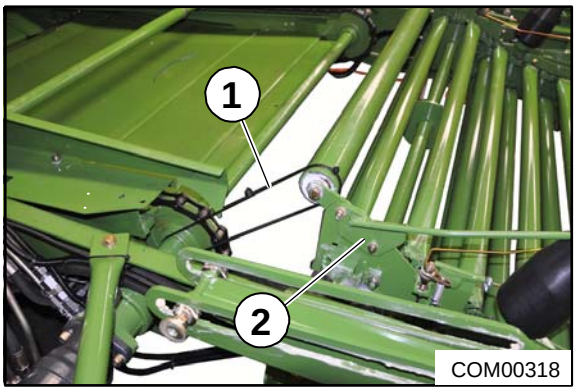


Fig.25

- Depressurise the tractor hydraulics.
- Connect the hydraulic hoses (1), (2) and (3) to the tractor hydraulics according to colour coding.



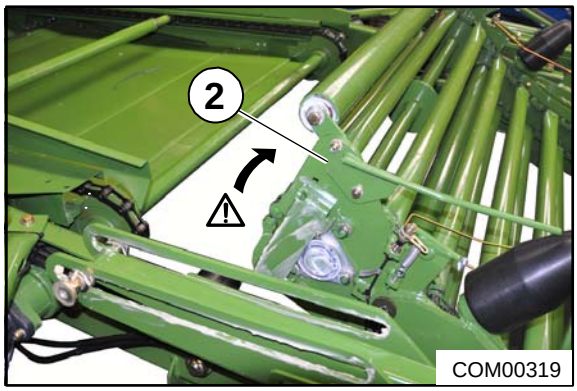


Fig. 26

Warning! – Abrupt Movement of the Wrapping Table!

Effect: Crushing hazard of hands between moving machine parts, danger of crashing.

- Instruct persons to leave the danger zone before loosening the cable ties
- When loosening the cable tie, take a position outside of the range of movement of the wrapping table

- Remove cable ties (2) for fixation of the wrapping table

5.2 Removing the transport holding down tensioning device

Comprima CF 155 XC

Note

If the clamping arms of the machine were pulled down and attached for transportation with the tensioning system (not all truck types), the tensioning system must be removed before the machine is started up.

Removing the tensioning device from the right and left sides of the machine:

DANGER! – The tensioning rocker and the attached tensioning device are under pressure!

Effect: Injuries or damage to the machine.

- No one is permitted inside the danger zone.

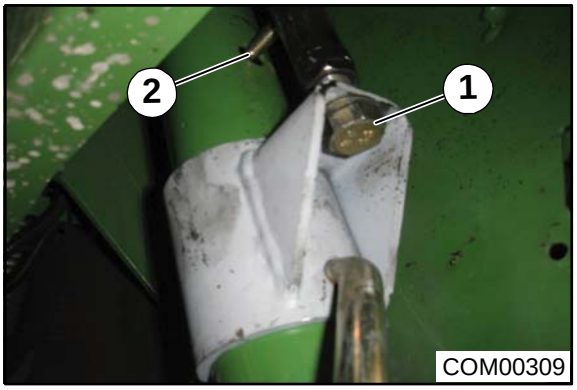


Fig. 27

ATTENTION!

The floor conveyor is tensioned by loosening the screws (1).

- Keep out of the danger zone!

- Remove the screw (2) by slightly tightening or loosening the screw (1).
- Loosen the screws 1 (on left and right) equally on both sides and remove.

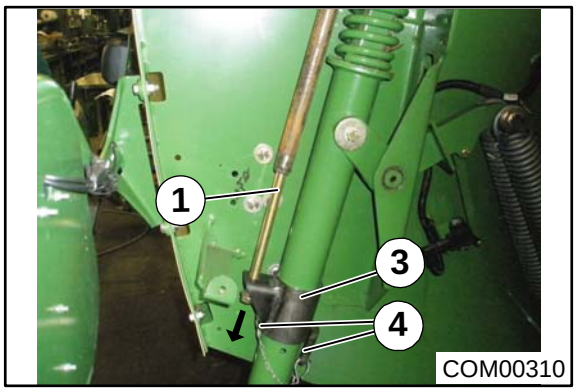


Fig. 28

- Remove the cotter pin and bolt (4) and remove the slip-on bushing (3) downwards. Re-attach the bolt (4) and secure with the cotter pin.

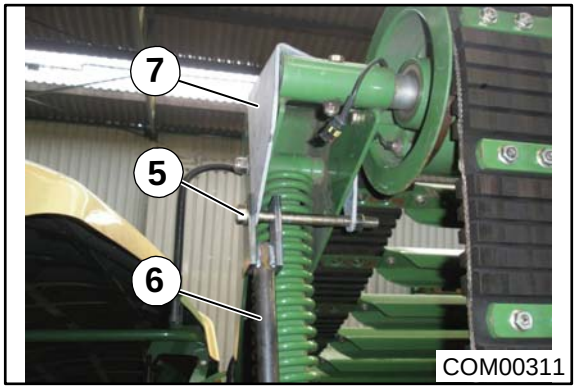


Fig. 29

- Remove the screw connection (5).
- Remove the connecting tube (6) and link (7).

Note

Dispose of all removed parts properly.
Reuse is not permitted!

Fig. 30

- Connect the plug connection (8) for the sensor on the left side of the machine.
- Mount the supplied plate (9) on the upper deflection roller of the belt.

5.3 Changing the Drawbar Height and Adjusting the Hitch

DANGER! - Unexpected movements of the machine!
Effect: Danger to life, injuries or damage to the machine.
- Secure the machine against rolling away with wheel chocks and by applying the parking brake
- Use suitable supporting blocks for supporting the machine
- There is a risk of crushing one's feet when cranking down the parking support

Note
Before aligning the machine and adapting the height of the drawbar, the tyre pressure must be checked and adapted to the value for the existing tyre type which is recommended in the tyre air pressure table (refer to chapter entitled “Maintenance”), if necessary.

Comprima CF 155 XC/Comprima CV 150 XC

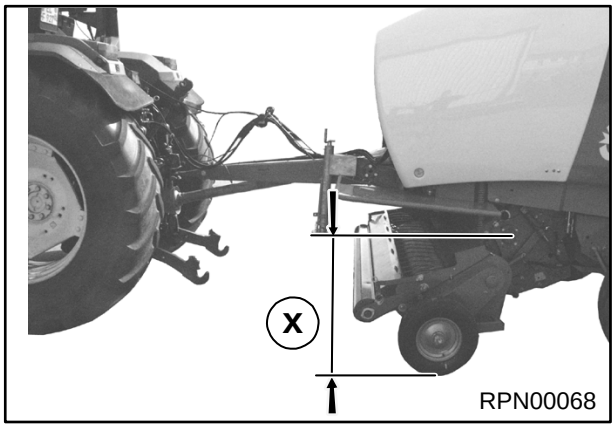


Fig. 31

Note
To guarantee optimum working, the machine must be hitched in a way that the dimension **X** is approx. 700-750 mm (up to 800 mm in straw use). When hitched up, the dimension X must be measured between the centre of the cutting roller and the ground.

Comprima CV 210 XC

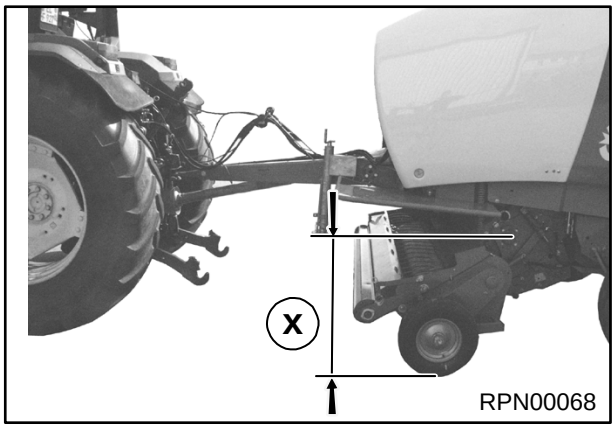


Fig.32

Note

To guarantee optimum working, the machine must be hitched in a way that the dimension (X) is approx. 800-850 mm (the dimension may change depending on the tyre size). When hitched up, the dimension X between the centre of the cutting roller and the ground must be measured.

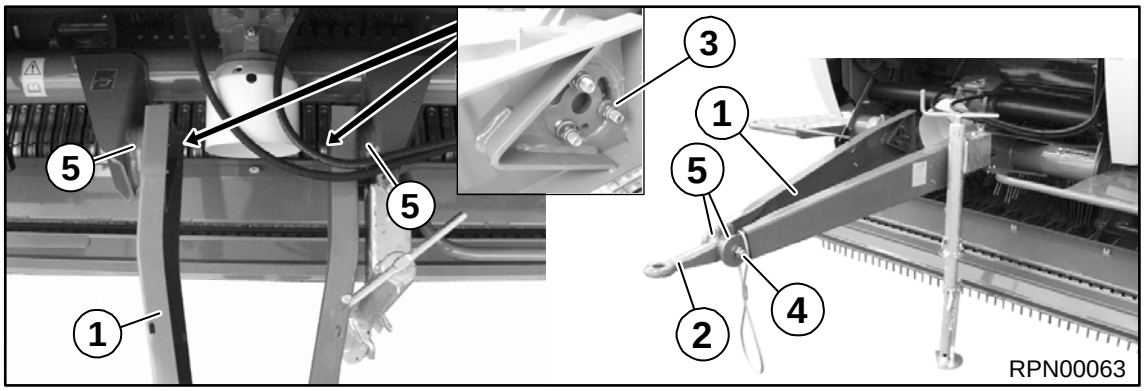


Fig.33

Note
Before starting the adjustment set the machine on the parking support and uncouple the tractor.

Adjusting the height of the drawbar:

- Loosen the safety nuts (3) until the drawbar (1) can be turned in the lock washer connection.
- Adjust the drawbar (1) to the height of the tractor hitch.

To adjust the height of the hitch to the height of the tractor hitch (make setting on both sides):

- Loosen the screw joint (4).
- Align towing ring (2) horizontal (parallel with the ground).
- Tighten the screw connections (3) and (4) to the appropriate torque.

Note
The lock washers (5) must intermesh.
Retighten the screw connections after 10 operating hours!

Note
Mind the tightening torques (refer to chapter Maintenance “Tightening torques”).

5.4 PTO shaft

5.4.1 Length adjustment

Warning! - Rotating universal shaft!

Effect: Danger to life or serious injuries

- Before pushing the universal shaft onto the PTO shaft of the tractor, switch off PTO shaft, turn off the engine and pull out the ignition key.
- Secure tractor and machine against unintentional rolling.

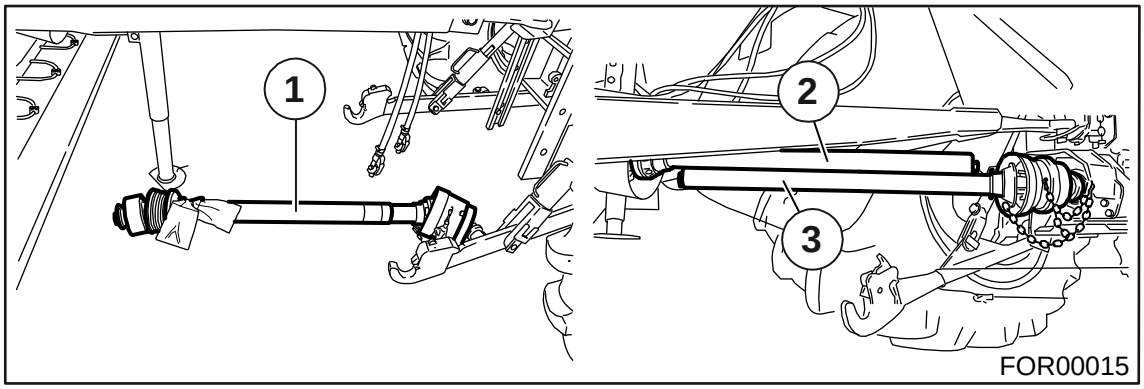


Fig. 34

To adapt the length of the universal shaft, hitch the machine onto the tractor. The shortest position of the universal shaft is reached in close cornering.

The length of the PTO shaft (1) must be adjusted.

- Disassemble the PTO shaft.
- Install each half (2) and (3) on the tractor and machine side respectively.
- Check the special section tubes and guard tubes.
- Shorten special section tubes and guard tubes to an extent that the PTO shaft can move freely in the shortest operating position.
- For additional operating instructions refer to the operating instructions of the PTO shaft manufacturer.

5.4.2 Mounting the PTO shaft on the machine side

Danger! - Rotating PTO shaft

Effect: Danger to life or serious injuries

- Install or detach the PTO shaft only with the engine switched off and the ignition key removed.
- Secure the tractor against rolling.
- Make sure that the PTO shaft is coupled properly (the lock of the PTO shaft must have snapped in).
- Make sure that the protective devices are attached properly.
- Never use a PTO shaft, the protective devices of which have not been attached.
- Replace damaged protective devices immediately
- Attach the safety chain of the PTO shaft so that the guard tube does not rotate simultaneously with the PTO shaft.

Danger! - Observe drive speed

Effect: Danger to life or serious injuries

- This machine is driven at a maximum PTO speed of 540 rpm.

Note

When mounting the universal shaft, make sure that the overload protection system will be installed on the side of the machine.

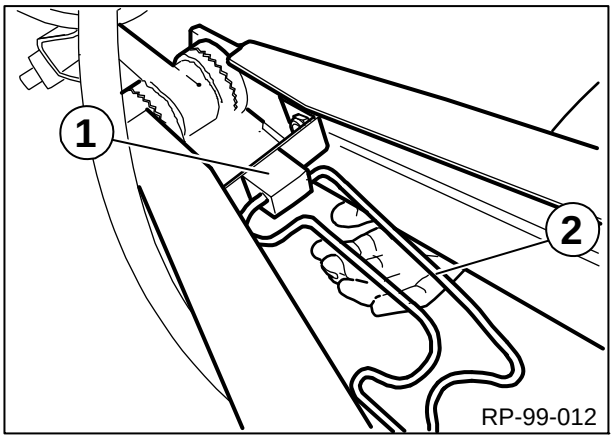


Fig. 35

- Switch off the engine and remove the ignition key.
- Assemble the PTO shaft bracket (1) and secure the PTO shaft support (2).

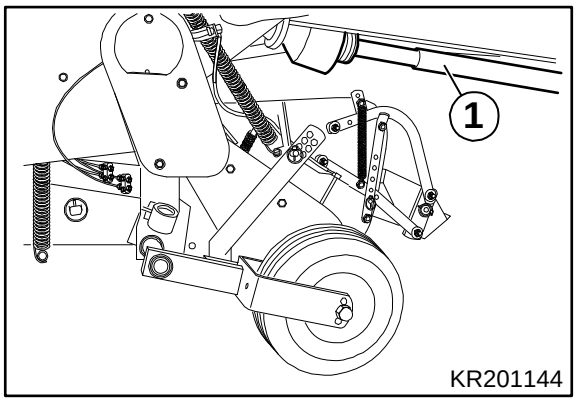


Fig.36

- Push on universal shaft (1) with overload protection on machine side until the safety mechanism engages or the universal shaft can be screwed (see the operating instructions provided by the PTO shaft manufacturer).
- Hook in the retaining chains of the universal shaft guard on machine side.

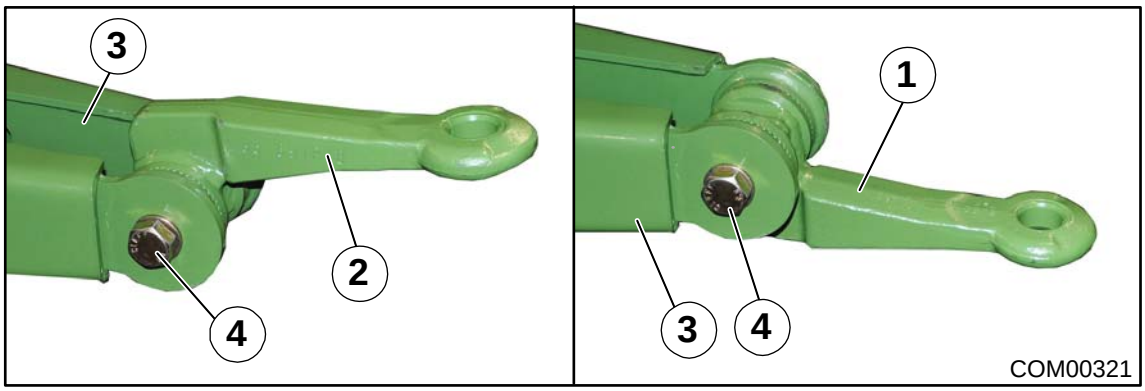


Fig. 37

Note

To achieve greater PTO shaft freedom, the towing ring can be mounted in position (1) or (2) on the drawbar (3).

- Use a suitable tool to loosen the screw connection (4).
- Rotate the towing ring to the desired position and use the screw connection (4) to mount it on the drawbar (3).

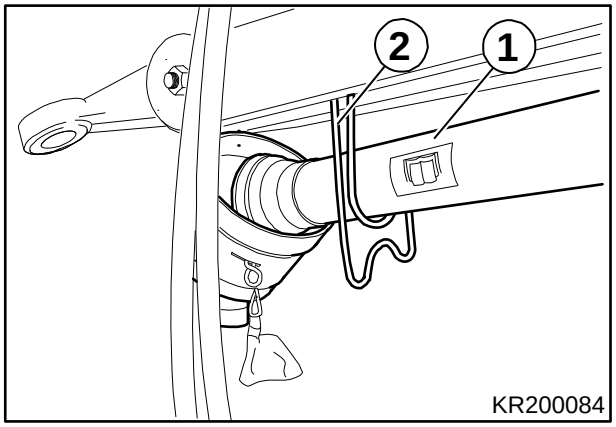


Fig.38

- Place the PTO shaft (1) inside the PTO shaft support (2).

5.5 Hose holder assembly

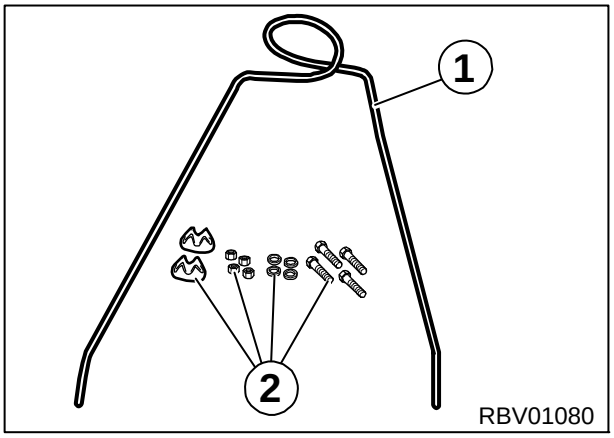


Fig. 39

- The hose holder (1) is mounted on the drawbar with the fastening materials (2).

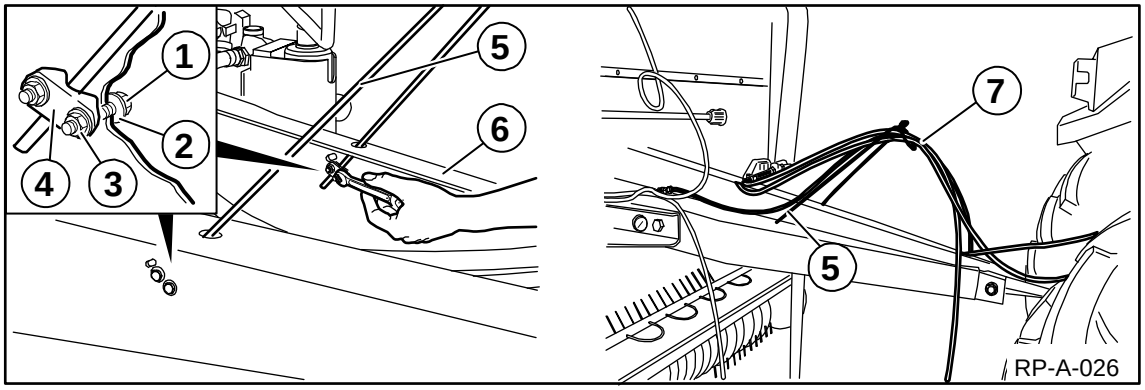


Fig. 40

- Guide the hose holder (5) through the oblong holes on the drawbar (6).
- Fasten the hose holder onto the drawbar with clamps (4), screws (1), washers (2) and self-locking nuts (3).
- Guide the hoses (7) through the eye of the hose holder (5).

6 Start-up

WARNING!

If the basic safety instructions are not followed, people may be seriously injured or killed.

- To avoid accidents, the basic safety instructions in the chapter Safety must have been read and followed, see chapter Safety "Basic safety instructions".

WARNING!

If the safety routines are not adhered to, people may be seriously injured or killed.

- To avoid accidents, the safety routines in the chapter Safety must be read and followed, see chapter Safety "Safety routines".

6.1 Mounting onto the Tractor

Warning!

There is a risk of injury when you hitch the machine to the tractor.

When you hitch the machine to the tractor, there is an increased risk of injury. For this reason, the following points must be observed. The failure to observe these instructions may result in persons being seriously injured or killed.

- Apply the parking brake on the machine.
- Secure the machine with wheel chocks to prevent it from rolling away.
- During the hitching procedure, never stand between the tractor and the machine.
- Switch off the tractor hydraulic and pneumatic system.
- Switch off all electronic systems.
- Turn off the diesel engine, remove the ignition key and take it with you.

The machine comes standard equipped with a hitch of Ø 40 mm (DIN 11 026). Depending on the specific requirement, the following hitches are also available:

- Ball-head hitch (K 80),
- Rotating hitch (export only),
- Hitch connection (export only).

Hitch and secure the machine according to regulations on the hitch of the tractor.

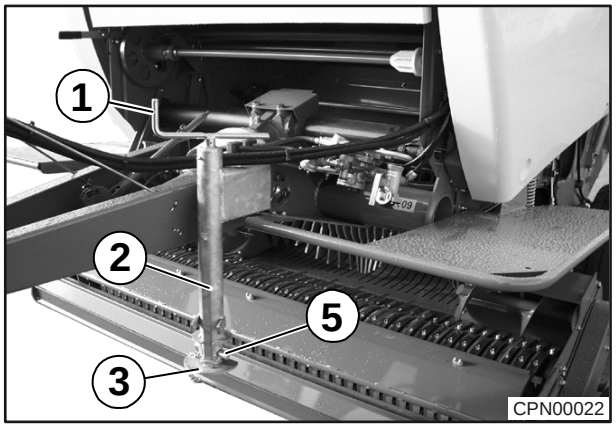


Fig. 41

Note

Risk of hands and feet when the parking support is actuated!

To raise the parking support:

- As soon as the machine is connected to the tractor, turn the crank (1) several revolutions clockwise until there is no more weight on the parking jack (3).
- Withdraw the locking bolt (5) on the lower part of the parking support (2), push in the parking support (2) and secure it in position with the locking bolt (5).
- Then crank the parking support (2) up all the way.
- Turn the parking jack (3) so that the flat side is facing the pick-up.

6.2 Hydraulics

6.2.1 Special Safety Instructions

Warning ! - Connection of the hydraulic line

Effect: severe injuries due to penetration of hydraulic oil under the skin.

- When connecting the hydraulic hoses to the hydraulic system of the tractor, the system must be relieved of the pressure on either side.
- Due to the risk of injury when searching for leaks, always use suitable tools and wear protective goggles.
- Seek medical help immediately should injuries occur! Danger of infection.
- Depressurise prior to uncoupling the hydraulic hoses and working on the hydraulic system!
- Check the hydraulic hose lines at regular intervals and replace them if damaged or worn! The replacement hoses must fulfil the technical requirements set by the equipment manufacturer.

WARNING! – Hydraulic hose lines are subject to ageing

Effect: Danger to life or serious injuries

The characteristics of the lines change depending on pressure, heat load and the effect of UV rays.

The date of manufacture appears on the hydraulic hoses. This way the age can be ascertained quickly.

By law the hydraulic lines must be replaced after six years.

Use original spare parts when replacing hydraulic hoses!

Caution! - Soiling of the hydraulic system

Effect: Damages to the machine

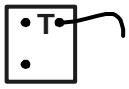
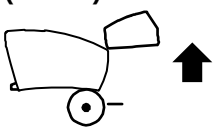
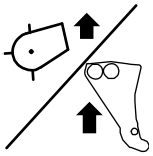
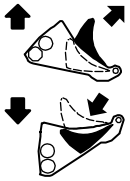
- When connecting the quick couplings, ensure that these are clean and dry.
- Note chafing areas or points of contact.

6.2.2 Connecting the hydraulic lines

Comprima CF 155 XC/Comprima CV 150 XC

To perform the following hydraulic functions, the tractor requires:

– 2 single-acting control units
– 1 double-acting control unit

Control	Function
(blue T) 	**Tank - free return** • Connection to free return to the tank
Single-acting control unit (red 1+) 	**Opening/closing the tailgate** • Pressure (red 1+): Open tailgate • Float position (red 1+): Close tailgate
Single-acting control unit (yellow 3+) 	**Raising/lowering the pick-up or blade base** (depending on preselected setting on control unit) • Pressure (yellow 3+): Raise the pick-up or blade base • Float position (yellow 3+): Lower the pick-up or blade base
Double-action control unit (green 7+/green 7-) 	**Lift/lower blade bar** • Pressure (green 7+): Raising blade bar • Pressure (green 7-): Lowering blade bar

Note

Connect hydraulic hoses correctly.

- The hydraulic hoses are marked with numbers and coloured dust caps.

- Set the single-action control units of the tractor to float position.
- Turn off the tractor and secure it against the possibility of rolling back.
- Connect the hydraulic coupling (blue T) of the machine to a single-action control unit of the tractor.
- Connect the hydraulic coupling (red 1+) of the machine to a single-action control unit of the tractor.
- Connect the hydraulic coupling (yellow 3+) on the machine to a single-acting control unit on the tractor.
- Connect the hydraulic couplings (green 7+ / green 7-) on the machine to a double-acting control unit on the tractor.

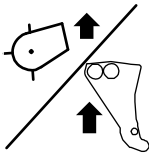
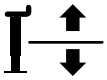
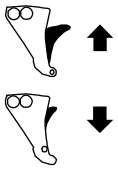
Note

For further information about connecting the hydraulic lines, refer to the tractor operating instructions.

Comprima CV 210 XC

To perform the following hydraulic functions, the tractor requires:

– 1 single-action control unit
– 2 double-action control units

Control	Function
Single-acting control unit (yellow 3+) 	**Raising/lowering the pick-up or blade base** (depending on preselected setting on control unit) • Pressure (yellow 3+): Raise the pick-up or blade base • Float position (yellow 3+): Lower the pick-up or blade base
Double-acting control unit (green 5+ / green 5-) 	**Raising/lowering support jack** • Pressure (green 5+): Raising support jack • Pressure (green 5-): Lowering support jack
Double-acting control unit (green 7+ / green 7-) 	**Raising/lowering the blade bar** • Pressure (green 7+): Raise blade bar • Pressure (green 7-): Lower blade bar

Note
Connect hydraulic hoses correctly.
• The hydraulic hoses are marked with numbers and coloured dust caps.

- Set the single-action control units of the tractor to float position.
- Turn off the tractor and secure it against the possibility of rolling back.
- Connect the hydraulic coupling (yellow 3+) on the machine to a single-acting control unit on the tractor.

For design with hydraulic support jack

- Connect the hydraulic couplings (green 5+ / green 5-) on the machine to a double-acting control unit on the tractor.

For design with hydraulic knife selection

- Connect the hydraulic couplings (green 7+ / green 7-) on the machine to a double-acting control unit on the tractor.

Note
For further information about connecting the hydraulic lines, refer to the tractor operating instructions.

6.3 Hydraulic brake (Export)

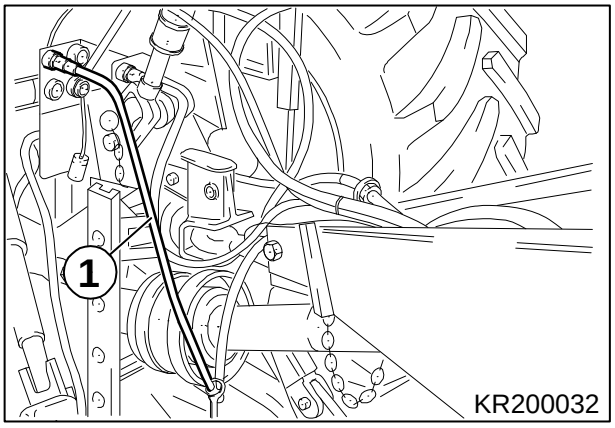


Fig. 42

A hydraulic brake is provided for certain export versions. In this version, the corresponding hydraulic hose is connected with the control valve on the tractor side. The brake is activated by actuating the tractor brake pedal.

6.4 Install the PTO shaft

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

Caution! - Changing the tractor

Effect: Damage to the machine

When using the machine for the first time and whenever changing the tractor Check PTO shaft for the correct length. If the length of the PTO shaft does not match the tractor, always observe the chapter entitled "Adjusting the length of the PTO shaft".

Caution! - Swivel range of the PTO shaft

Effect: Damage to the tractor or the machine

- Check the swivel range and clearance of the PTO shaft!

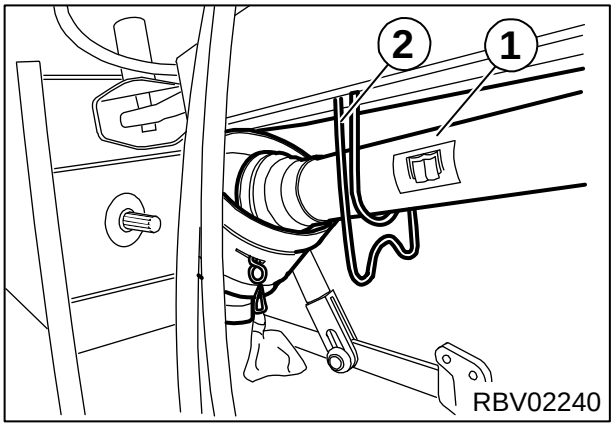


Fig. 43

- Remove the universal shaft (1) from the PTO shaft support (2)

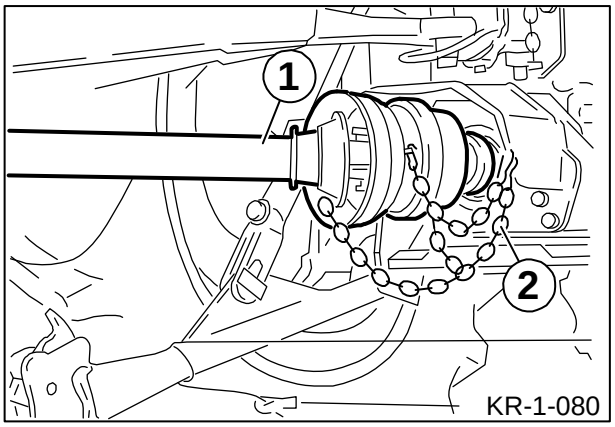


Fig. 44

CAUTION!

Contact with parts of the tractor or the machine may result in damages to the machine or to the universal shaft

- Make certain there is sufficient free space in the swivel range of the PTO shaft in all operating states.

Tractor Side:

- Slide universal shaft (1) on the tractor PTO shaft and secure it
- To prevent the PTO shaft from turning, guide the safety chain (2) under the universal shaft guard and insert it onto the tractor

ATTENTION! - Universal shaft not correctly attached.

Effect: Damage to the universal shaft or to the machine

- Ensure that the safety device of the universal shaft is locked into place after installation.
- Use only the universal shaft supplied by the factory.

6.5 Compressed Air Connections for the Compressed Air Brake

WARNING!

Danger to life due to failure of the brake system or unexpected movement of the machine.

Pneumatic lines that become detached or worn through pneumatic lines will cause the brake system to fail. Thus there is a risk of serious injuries or death.

- Lay the pneumatic lines so that they do not rub or tension. Furthermore they should not be jammed or touch other parts (e.g. tractor tyres).

The machine may move unintentionally if the order of the pneumatic lines is interchanged when connecting them. Thus there is a risk of serious injuries or death.

- Connect the yellow coupling head first.
- Then connect the red coupling head.
- After having connected the quick couplings, check that they fit perfectly.

The machine can optionally be equipped with a dual-line compressed air braking system.

The coupling heads are connected to the machine for attachment of the reservoir (red) and brake line (yellow) of the tractor.

WARNING!

Risk of accident due to insufficient brake force.

- For road travel, driving is permitted in position (2) “Full load” only.
- In the “Half load” or “Zero load” position, the braking effect can be adapted (reduced), e.g. when working on wet meadows.

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

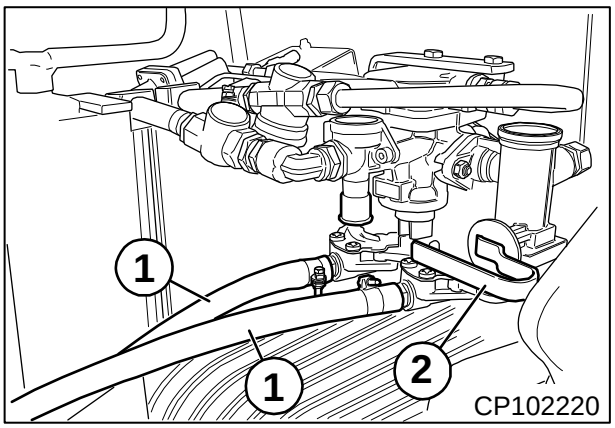


Fig. 45

- Insert the coloured compressed air hose couplings (1) into the correspondingly coloured couplings on the tractor.

Note

Always connect the yellow coupling head first, then the red one. Detach the couplings in reverse order.

6.6 Electrical connections

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

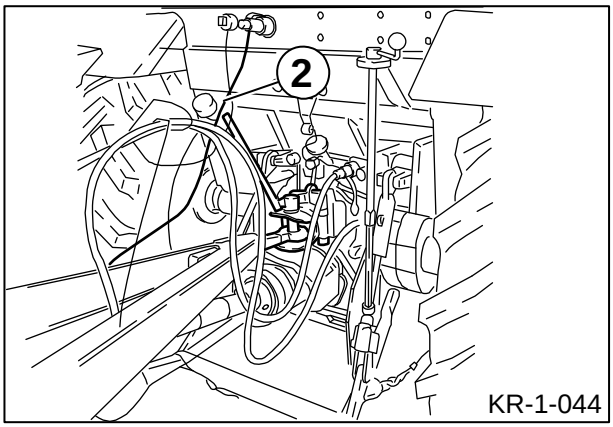


Fig. 46

- Connect the connection cable (2) for the lighting to the 7-pin plug-in connector of the tractor electrical system
- Position the connection cable (2) so that it will not come in contact with the wheels
- Install the control console so that it is easily visible to the driver
- Connect the power supply cable (according to DIN 9680) to the 3-pin power supply socket

Note

Request the 3-pin power supply socket with connection cable from the spare parts service (spare parts no. 0303-914-0) if the connection is not available on the tractor.

Note

Extension cables for the terminal can be ordered under the following spare part numbers:

- 303 174 0 (2500 mm length)
- 302 959 0 (5000 mm length).

6.6.1 Connecting the terminal (on tractors without ISOBUS system)

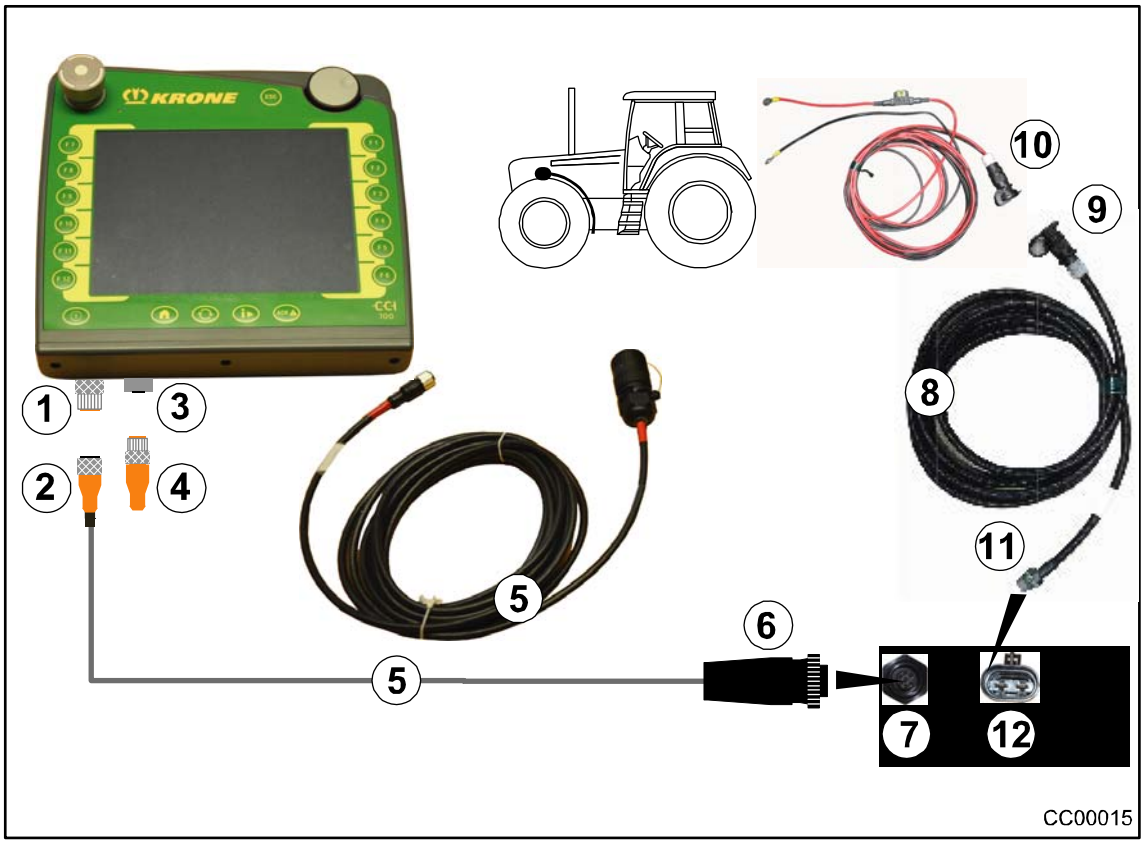


Fig. 47

Connection terminal to machine

Note

The connection of terminal to machine takes place via a provided cable set (5) (article no. 20 081 224 0).

- Connect plug (2) of cable set (5) with socket (1) (CAN1-IN) of the terminal
- Connect plug (6) (7-pole) of cable set (5) with socket (7) (7-pole) of the machine
- Connect connector plug (4) (article no. 00 302 300 0 included in scope of delivery) with socket (3) (CAN1-OUT) of the terminal

Connection tractor to machine

Note

The connection of tractor to machine takes place via a provided power cable (8) (article no. 20 080 601 0).

- Connect plug (9) of power cable (8) with continuous current socket (10) of the tractor
- Connect plug (11) (2-pole) of power cable (8) with socket (12) (2-pole) of the machine

6.6.2 Connecting the Terminal (on tractors with integrated ISOBUS system)

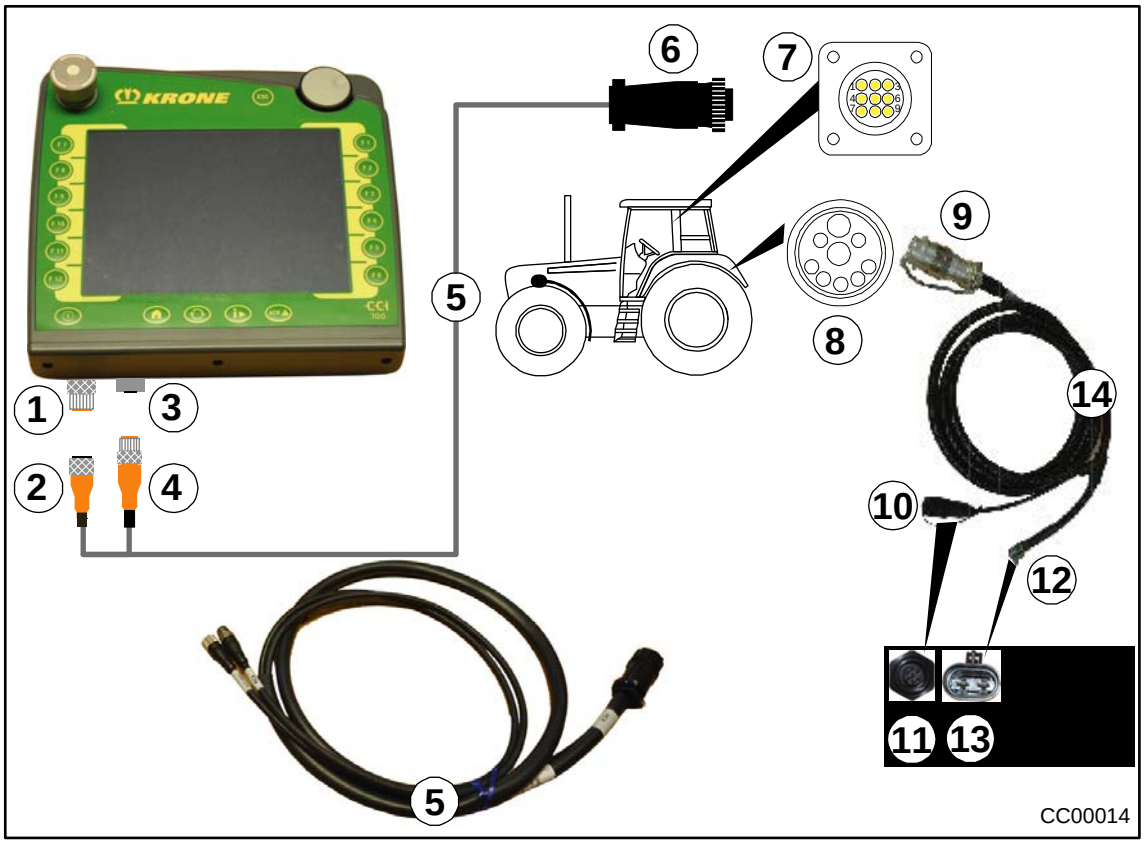


Fig. 48

Connection terminal to tractor

Note

The terminal is connected to the tractor via a special cable set (5) which can be ordered by stating the KRONE article no. 20 081 223 0.

- Connect plug (2) of cable set (5) with socket (1) (CAN1-IN) of the terminal.
- Connect plug (4) of cable set (5) with socket (3) (CAN1-out) of the terminal.
- Connect ISO plug (6) (9-pole) of cable set (5) with the ISO socket (7) (9-pole) located in the tractor cabin.

Connection tractor to machine

Note

The tractor is connected to the machine via cable set (14) which can be ordered by stating KRONE article no. 20 080 384 0.

- Connect ISO-plug (9) (9-pole) of cable set (14) with the outer ISO socket (8) (9-pole) on tractor side.
- Connect plug (10) (7-pole) of cable set (14) with socket (11) (7-pole) of the machine.
- Connect plug (12) (2-pole) of cable set (14) with socket (13) (2-pole) of the machine.

6.7 Using the safety chain

WARNING!

When using a wrongly dimensioned safety chain, the safety chain may tear if the machine loosens unintentionally. This can result in serious accidents.

- Always use a safety chain with a minimum tensile strength of 178 kN (40.000 lbf).

WARNING!

If the safety chain is layed so that it is too tight or too loose, then it may tear. As a result, serious injuries or damage to tractor and machine may be caused.

- Position the safety chain so that it does not tension when cornering. Also make sure when laying it that it does not touch the tractor wheels or other parts of tractor or machine.

Note

Using the safety chain

Attachment of the safety chain is not stipulated in all countries.

The safety chain is used as an additional safety precaution for trailed devices, should they become detached from the drawbar during transport. Attach the safety chain with the respective mounting parts to the hitching device on the tractor or to another specified connection point. The safety chain should have just enough play to be able to go around curves.

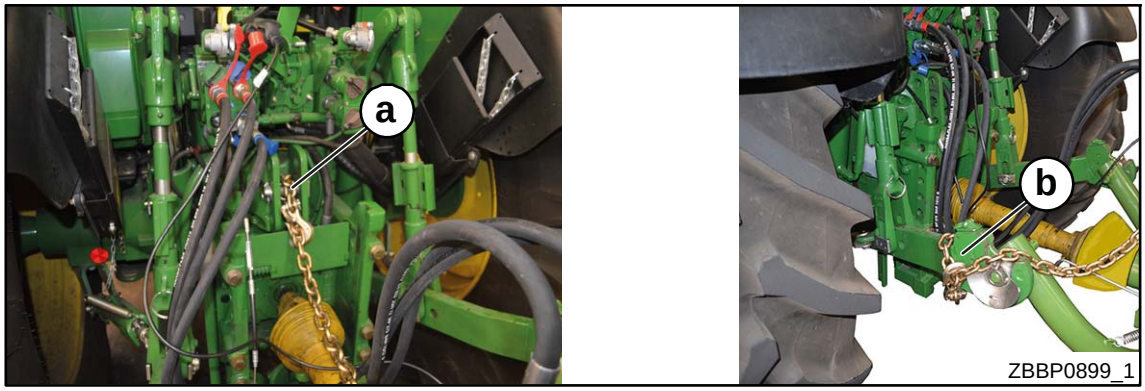


Fig. 49

- Install safety chain (1) on an eligible position (for example: a or b) on the tractor.

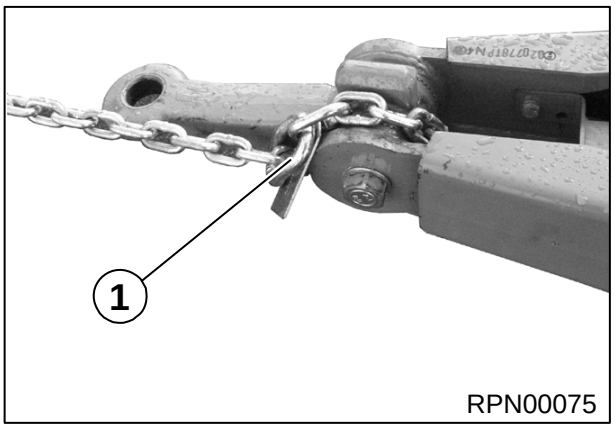


Fig. 50

- Install the safety chain (1) on the machine.

6.8 Net Brake

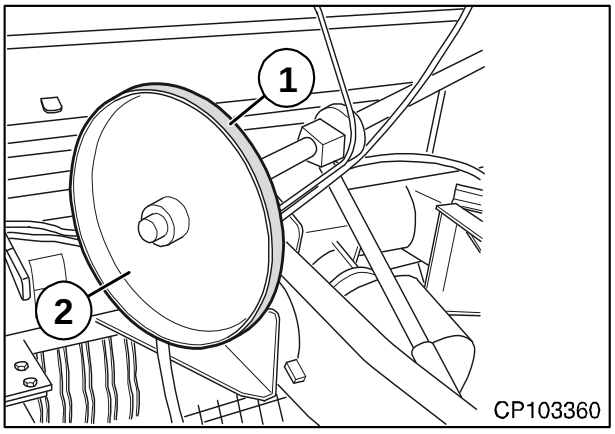


Fig. 51

- Before starting up for the first time, remove the sheet cleanly from the brake surface (1) of the net brake disk (2)

6.9 Running-in Period

The time during which the first 100 round bales are formed may be considered the running-in period. (i. e. until the colour on the bale chamber walls is ground off).

Note

The machine is designed for the specified bale diameters and firmness levels. Wrapping bales of excess size or increased bale pressure too frequently will result in increased wear and may result in premature damage to the machine (floor conveyor and drive).

6.9.1.1 Cam-type Clutch Engaging

If the cam-type clutch engages (slips through) during the baling process, proceed as follows:

- Turn off the PTO shaft
- Allow the PTO to run at idle until the cam-type clutch has engaged
- Allow the PTO to run at nominal speed

6.10 Wrapping table

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

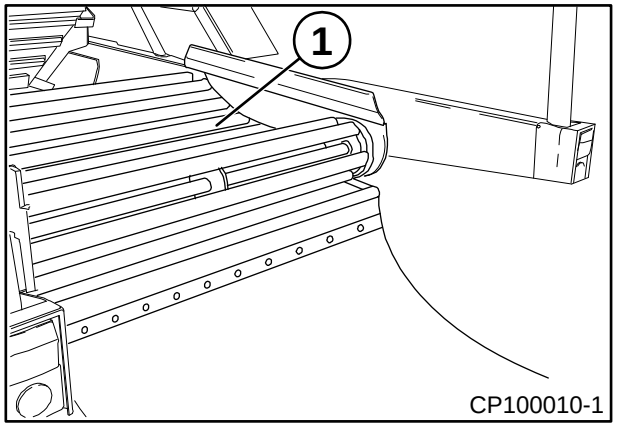


Fig. 52

- If the wrapping table (1) was used as a transfer table e.g. in straw (without film wrapper), the straw remnants must be removed before it is used in silage (with film wrapper).

6.11 Using the bale cloth

The bale cloth protects the film on the wrapped bale from damage when the bale is put down on the ground.

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

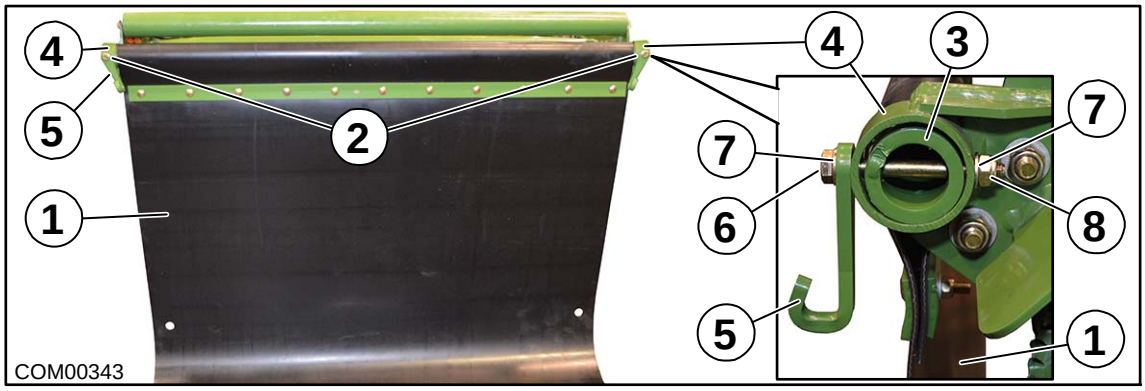


Fig. 53

Removing the bale cloth (1) when used without film wrapper:

- Remove the screw connections (2) on the right and left.
- Pull the support tube (3) out of the holders (4) and bale cloth.
- Store the support tube and bale cloth in a dry and clean location.

Fitting the bale cloth (1) when used with film wrapper:

- Guide the support tube (3) through the holders (4) and bale cloth.
- Attach the support tube and the hooks (5) on the right and left with hexagonal head screw (6), washers (7) and locknut (8).

6.12 Start-up Bale Turner

The bale turner is used to set bales down from the wrapping table directly on the ground on their front side.

Bales must be stood up while the machine is stopped.

Functional safety can only be guaranteed to a limited extent on slopes. Check the sheet after the bales have been stood up. In extreme situations (for example conical bales, on slopes) standing up the bale could possibly result in damage to the sheet. In this case bales should not be stood up and the bale turner must be folded back (1) or removed.

Fig. 54

Note

Depending on the setting of the bale turner, it can remain folded back on the wrapping table, even if bales are not being stood up.

Note

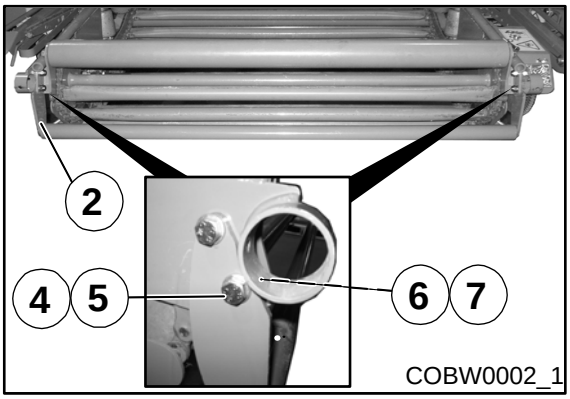
We are unable to honour claims for damage due to spoiling of silage because numerous factors involved are beyond our control.

Note

Under difficult conditions (for example on slopes), the functional safety of the bale turner can be increased by using the largest possible tyres (500/55-20 12 PR).

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

6.13 Mounting the Stop / Holding Tube



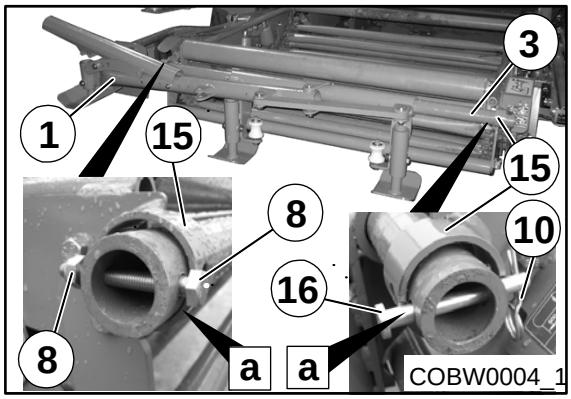


Fig. 55:

- Remove the bale cloth from the swivel table and keep it in a protected place for later reinstallation.
- Install the stop (2) with bolts (4), washers (5), detent edged washers (6) and nuts (7) on the right and left of the swivel table.
- Guide the holding tube (3) through the support (15) from the outside (machine hole series of the holding tube must point to the right as seen in direction of travel).
- Guide the holding tube (3) through the bale turner (1) and on through the support (15) on the other side of the swivel table.
- Secure the holding tube (3) on the left as seen in the direction of travel with a screw (8) and nut (9), and on the right as seen in the direction of travel with a bolt (16) and spring cotter pin (10).

CAUTION!

Holding tube (3) secured incorrectly

Effect: Damage to the machine

Make certain that the holding tube (3) is secured on the right side (pos. a) by the screw (9) (on the left) or spring cotter pin (10) (on the right).

Never secure the holding tube (3) through the boreholes of the supports (15).

6.14 Positioning the Bale Turner

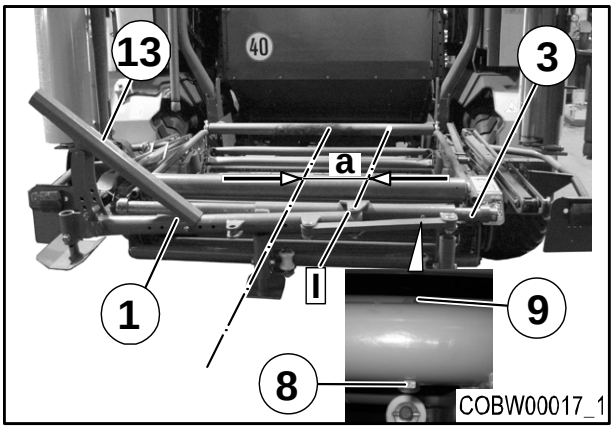


Fig. 56

- Push the bale turner (1) on the holding tube (3) to the right until the pivot point (I) of the bale turner is about a = 200 mm to the right outside of machine centre (centre borehole on the holding tube (3)).
- Fasten the bale turner (1) in this position with a screw (8) and nut (9).

Note

During road travel the baffle plate (13) must always be folded out, otherwise the left rear light would be covered.

6.15 Moving the Bale Turner into Working Position

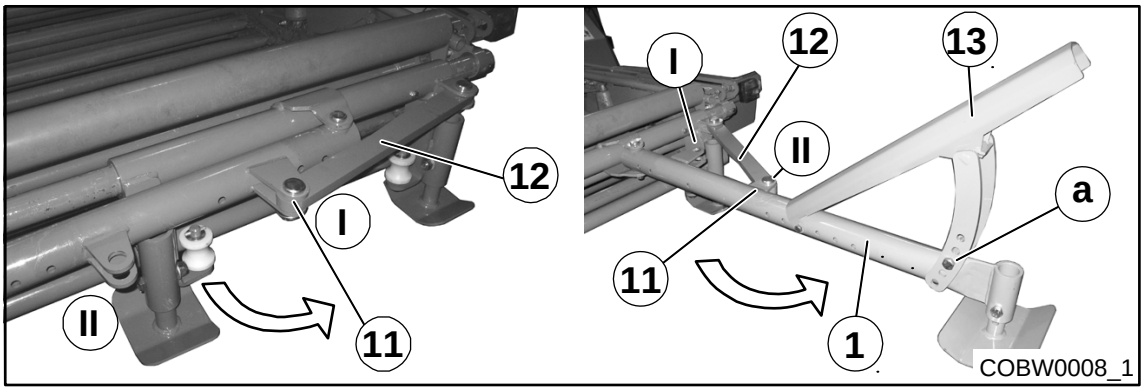


Fig. 57:

- Swivel the locking bar (12) out of position (I) by removing the bolt (11).
- Fold out the bale turner (1).
- Swing locking bar (12) into position (II) and secure with bolt, washer and cotter pin (11).

6.15.1 Adjusting the Baffle Plate

The height of the baffle plate (13) is adjustable.
Making the adjustment:

- Loosen screw connections on the baffle plate (13).
- Move baffle plate (13) to the required position and secure with bolts, washers and nuts.

Note
We recommend using the centre borehole (a) for the baffle plate setting.

6.16 Adjusting the parking jack

Fig. 58:
The height of each parking jack (14) is adjustable.

Note
The parking jacks have been pre-adjusted in the factory. We recommend leaving the parking jacks in this position.

Making the adjustment:

- Loosen the screw connection on the parking jack (14).
- Move the parking jack (14) to the required position and secure with bolt, washer and nut.

6.17 Moving the Bale Turner into Transport Position

Danger! – Transport / road travel

Effect: Danger to life, serious injuries or serious damage to the machine.

- The bale turner must be swivelled up into transport position for transport / road travel.
- Make certain that the locking bar (12) is in pos. (I) in transport position and secured with bolt and cotter pin.

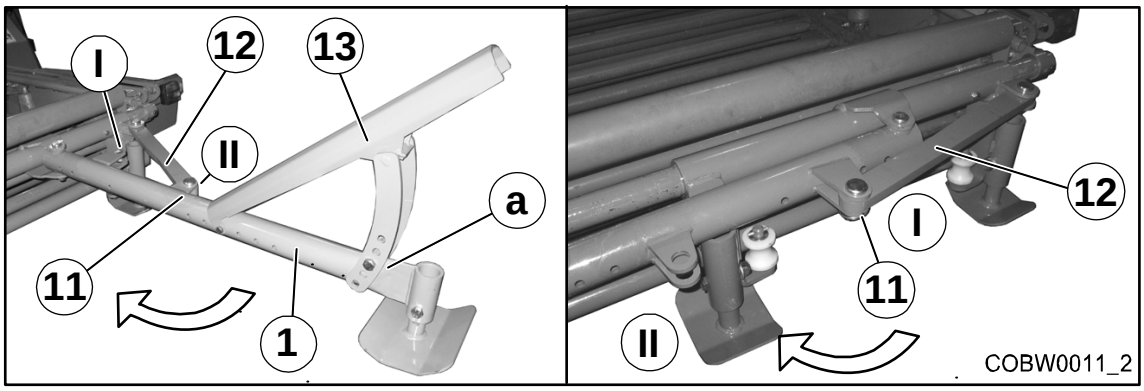


Fig. 59

- Swivel the locking bar (12) out of position (I) by removing the bolt (11).
- Fold in bale turner (1).
- Swing locking bar (12) into position (I) and secure with bolt, washer and cotter pin (11).

Note

During road travel the baffle plate (13) must always be folded out, otherwise the left rear light would be covered.

6.18 Mounting the bale cloth on the bale turner

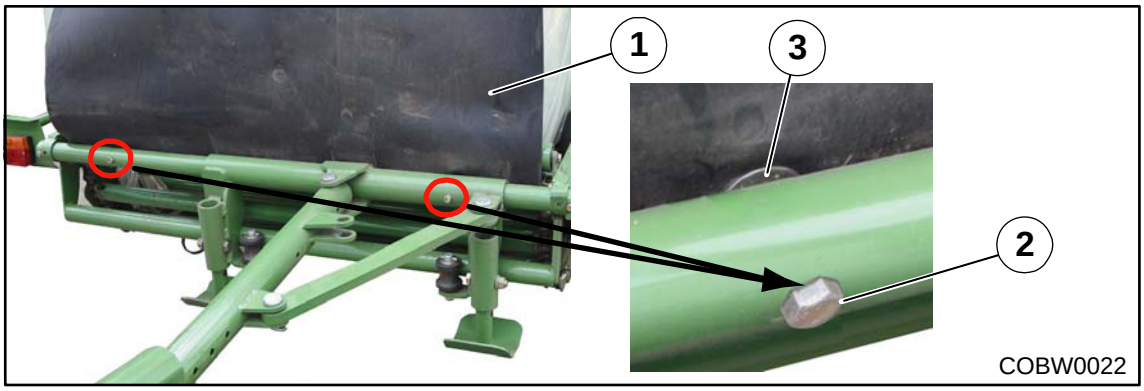


Fig. 60:

Mount the bale cloth (1) on the marked bore holes of the bale turner as follows:

1. Guide the hexagonal head screws (2) on the right and left through the bore holes and place a washer (3) on the screw stem.

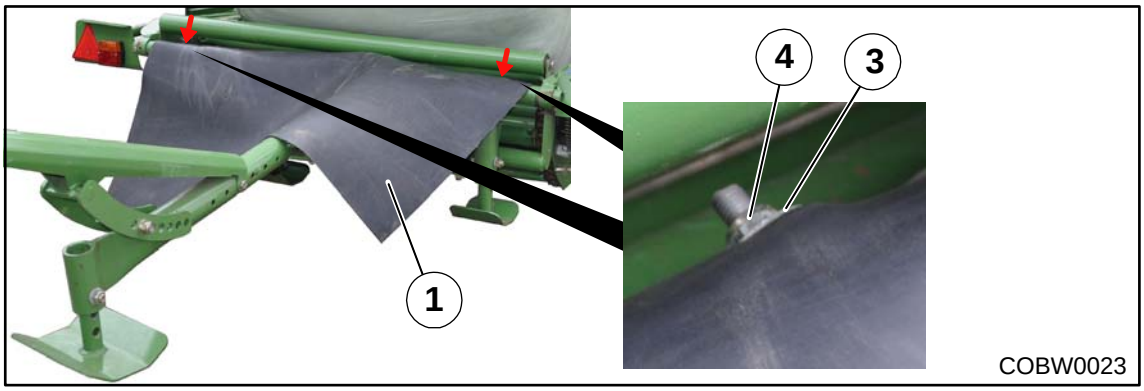


Fig. 61

2. Attach the bale cloth (1) to the hexagonal head screws (2) right/left, fit the washers (3) and nuts (4) and tighten.

6.19 Removing the bale turner

Note

Follow the same steps in reverse order to remove the bale turner.

7 Driving and Transport

WARNING!

If the basic safety instructions are not followed, people may be seriously injured or killed.

- To avoid accidents, the basic safety instructions in the chapter Safety must have been read and followed, see chapter Safety "Basic safety instructions".

WARNING!

If the safety routines are not adhered to, people may be seriously injured or killed.

- To avoid accidents, the safety routines in the chapter Safety must be read and followed, see chapter Safety "Safety routines".

WARNING!

There is a risk of accidents if the control valves on the tractor are not locked.

If the control valves are not locked, machine components may be activated unintentionally. This can result in serious accidents.

- To prevent functions being triggered accidentally, the control valves on the tractor must be switched to neutral and locked during road transport journeys.

WARNING!

Danger when cornering with a machine hitched

When cornering, the hitched machine swings out further than the tractor. This can lead to accidents.

- Take the greater swivel range into account.
- When turning, take account of people, oncoming traffic and obstacles.

7.1 Preparations for road travel

The following tasks must be performed on the machine and tractor before road travel:

7.1.1 Lifting the Pick-up

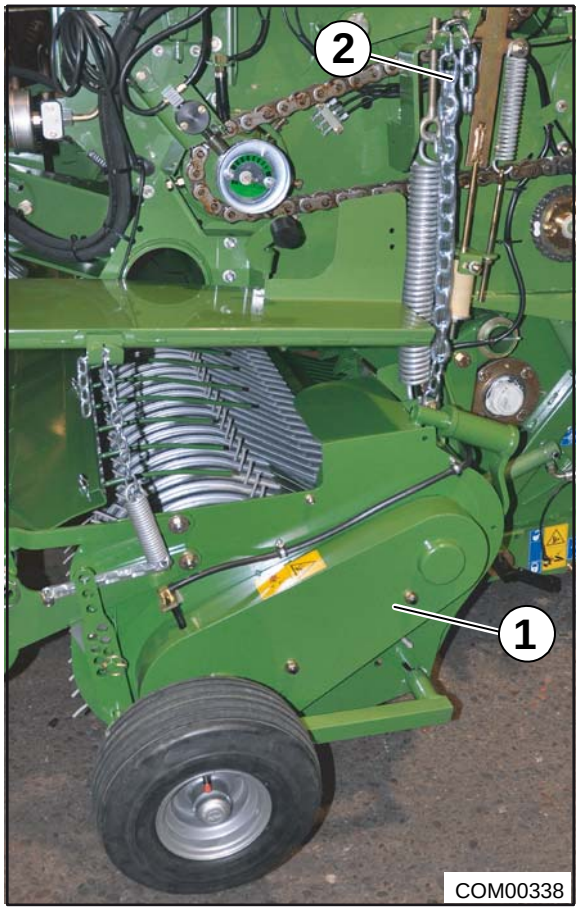


Fig. 62

1. Raise pick-up (1) hydraulically.
2. Secure pick-up (1) with chain (2).
3. Check the lifted and secured pick-up (1).

7.1.2 Checking Parking Support

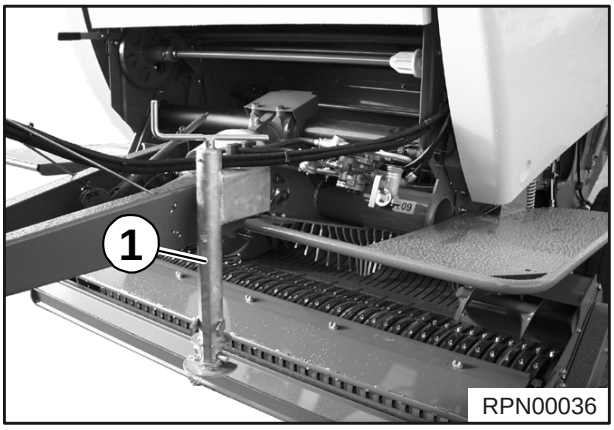


Fig. 63

- Interrupt power supply for operation.
- Check transport position of the parking support (1).

7.1.3 Checking the lighting system

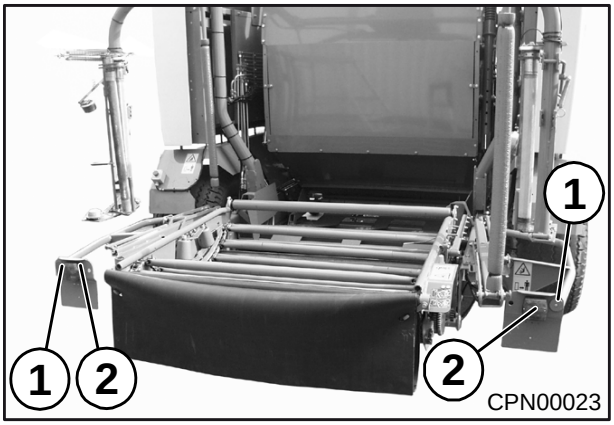


Fig. 64

- Connect the lighting system to the tractor electrical system.
- Check the function of the tail lights (2) and rear reflectors (1) and clean them
- The same applies to the yellow reflectors located on the sides of the machine and the front white side lights

7.1.4 Attaching the bale cloth

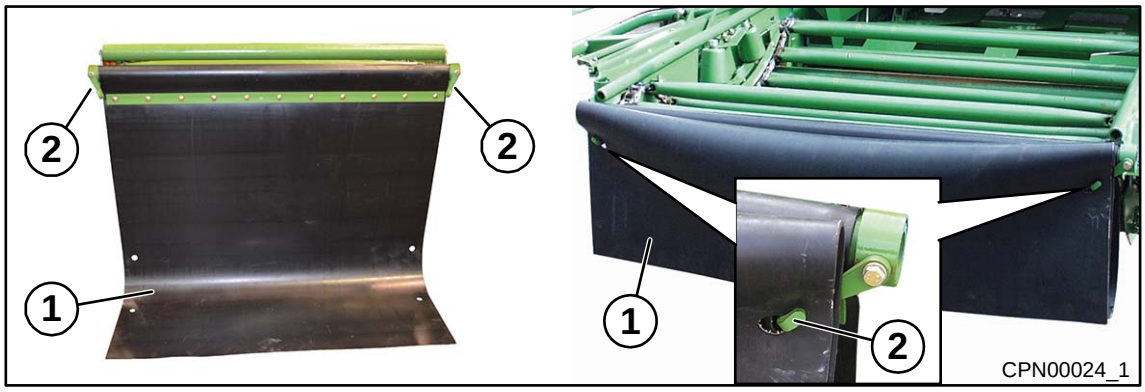


Fig. 65

- Attach the bale cloth (1) to the side hooks (2) so that it does not touch the ground.

7.2 Parking

DANGER! - Unexpected movements of the machine
Effect: Danger to life, serious injuries

- Make sure that there is no one in the danger zone.
- The machine must only be uncoupled when the engine is switched off and the ignition key is removed.
- Put machine down on level and firm ground. Increase surface of the parking support when putting the machine down on unfortified ground.
- Secure the machine with wheel chocks against the possibility of rolling back before uncoupling it.
- Take care when cranking down the parking support. There is danger of crushing your feet!
- Only remove the universal shaft when the PTO shaft and the engine are switched off and the ignition key is removed.
- Place universal shaft into the support provided.
- The tailgate must only be actuated when the baler is connected properly to the tractor.
- When connecting the hydraulic hose to tractor hydraulics and when disconnecting it from the tractor hydraulics, the system on tractor and machine must be depressurized! Move the appropriate control valves into float position.

7.2.1 Securing the Machine Against the Possibility of Rolling Back

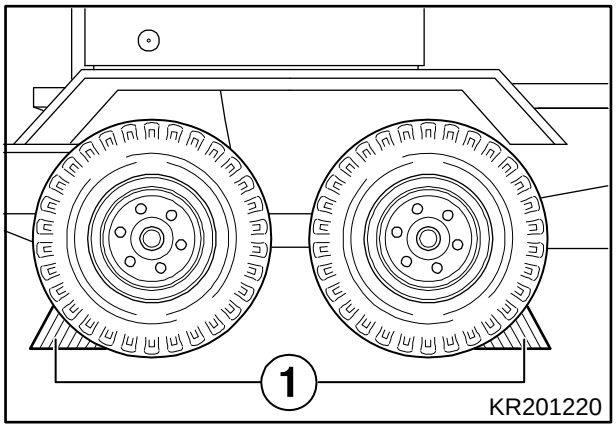


Fig. 66

- Park the machine on firm, level ground.
- Place two wheel chocks (1) under the wheels to prevent the machine from rolling away. The wheel chocks are located in front on both sides of the machine.
  Always place wheel chocks (1) in front of and behind the tyres. (This will prevent the machine from rolling away).

7.2.2 Lowering the Parking Support

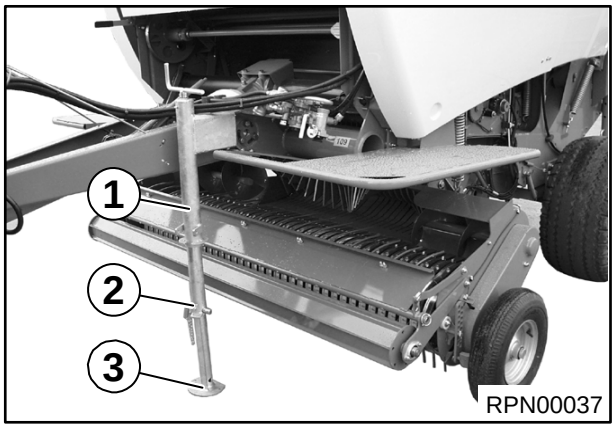


Fig. 67

- Remove stake bolt (2), bring the support pipe out of the parking support (1) and then secure again with the stake bolt (2).
- Crank the support plate (3) tightly onto the ground until pressure on the drawbar has been relieved.

7.2.3 Disconnecting the PTO shaft from the tractor

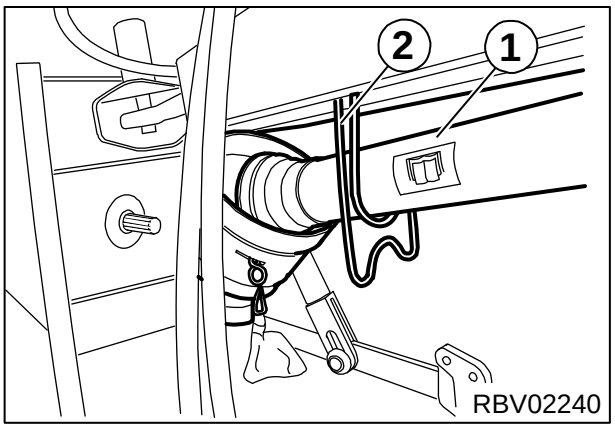


Fig. 68

- Disconnect the PTO shaft (1) on the tractor side.
- Place the PTO shaft (1) inside the PTO shaft support (2).

7.2.4 Disconnecting the Supply Lines

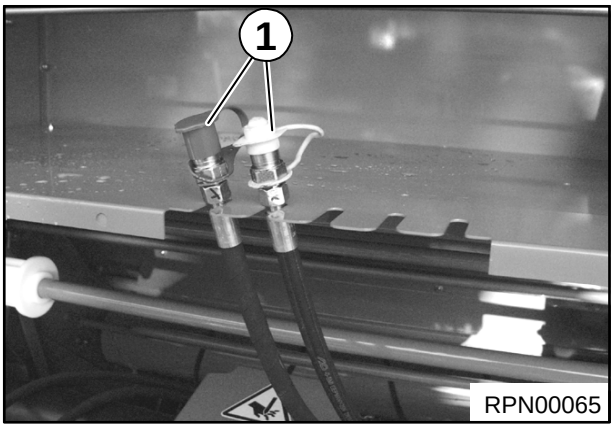


Fig. 69

- Disconnect the hydraulic hoses (1) and electrical connecting cables and store them properly in the corresponding receptacle on the twine box.
- Disengage the hitch coupling or pull the bolt.
- Drive the tractor away slowly.

8 KRONE ISOBUS Terminal

Note

In the operating instructions which follow, the terminal will also be referred to as the "control unit".

Caution! - Protect Control Unit.

Effect: Damage to the control unit

- The control unit must be protected against water.
- If the machine is not used for an extended period of time (for example during the winter), the control unit must be stored in a dry place.
- For mounting and repair jobs, especially for welding jobs on the machine, disconnect the power supply to the control unit. Overvoltage can damage the control unit.

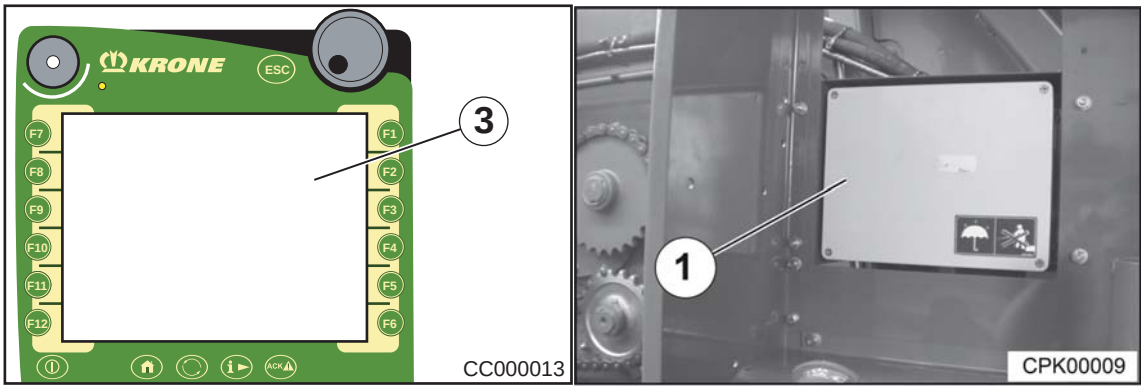


Fig. 70

The electronic equipment of the machine consists essentially of the job computer (1), the terminal (3) and the control and function elements.

The job computer (1) is located on the front left of the machine under the side hood.

Its functions are:

- Control of the actuators installed on the machine
- Sensor system/actuator diagnostics
- Bale counter
- Transfer of alarm messages

The control unit (3) communicates information to the driver and performs settings to operate the machine. This information is received and further processed by the job computer.

8.1 Installing the terminal into cabin

Note

Please mind the terminal operating instructions included with delivery for the installation of the terminal into the tractor cabin.

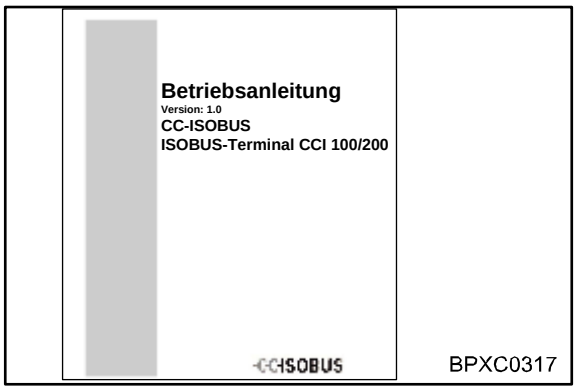


Fig. 71

8.2 ISOBUS Short Cut Button

DANGER! – risk of injury by running machine!

Your machine supports the ISOBUS short cut button.

- By actuation of the ISOBUS short cut button (1) the machine functions are switched off in order to be able to initiate a secure condition of the machine in hazardous situations. Process oriented procedures perform to the end. Therefore, machine parts continue to run after actuating the ISOBUS short cut button. This can lead to injuries
- The ISOBUS short cut button does in no case interfere with tractor functions, i.e. neither universal shaft functions nor hydraulic functions will be affected in any way! Therefore, the machine can continue to run after actuating the ISOBUS short cut button. This can lead to injuries

When actuating the ISOBUS short cut button (1) of the terminal which is of the pushbutton design, a stop command is sent onto the ISOBUS. This command will be evaluated by your connected ISOBUS- machine, in order to initiate the accordant automatic actions in hazardous situations if necessary.

If the ISOBUS short cut button is actuated, the accordant alarm mask will be shown in the display:

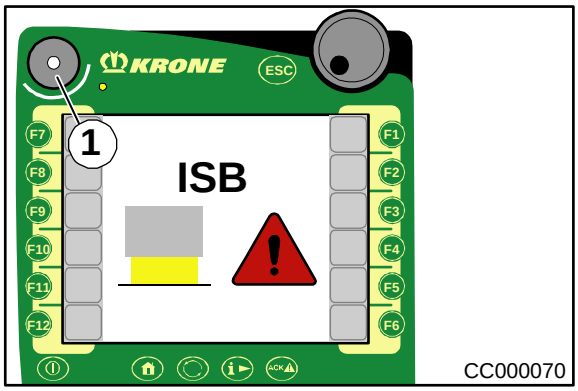


Fig. 72

The functions listed in the following are blocked by the job computer on the machine side.

- All functions of the machine are stopped.

If the ISOBUS short cut button is deactivated again, the following message will appear in the display:

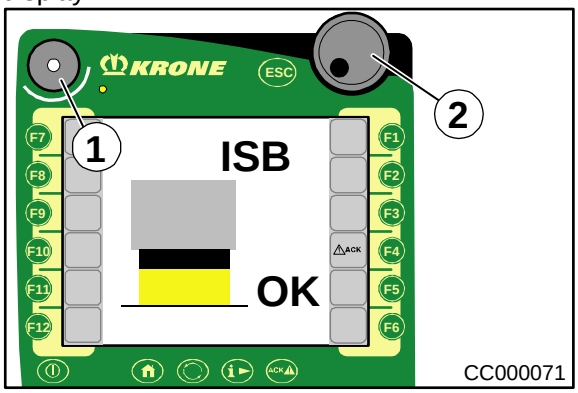


Fig. 73

The alarm mask is exited by actuating the function key

. It is only now that all functions of the machine are available again.

8.2.1 Connecting the Multi-Function Lever to the CCI Terminal (on Tractors with an Integrated ISOBUS System)

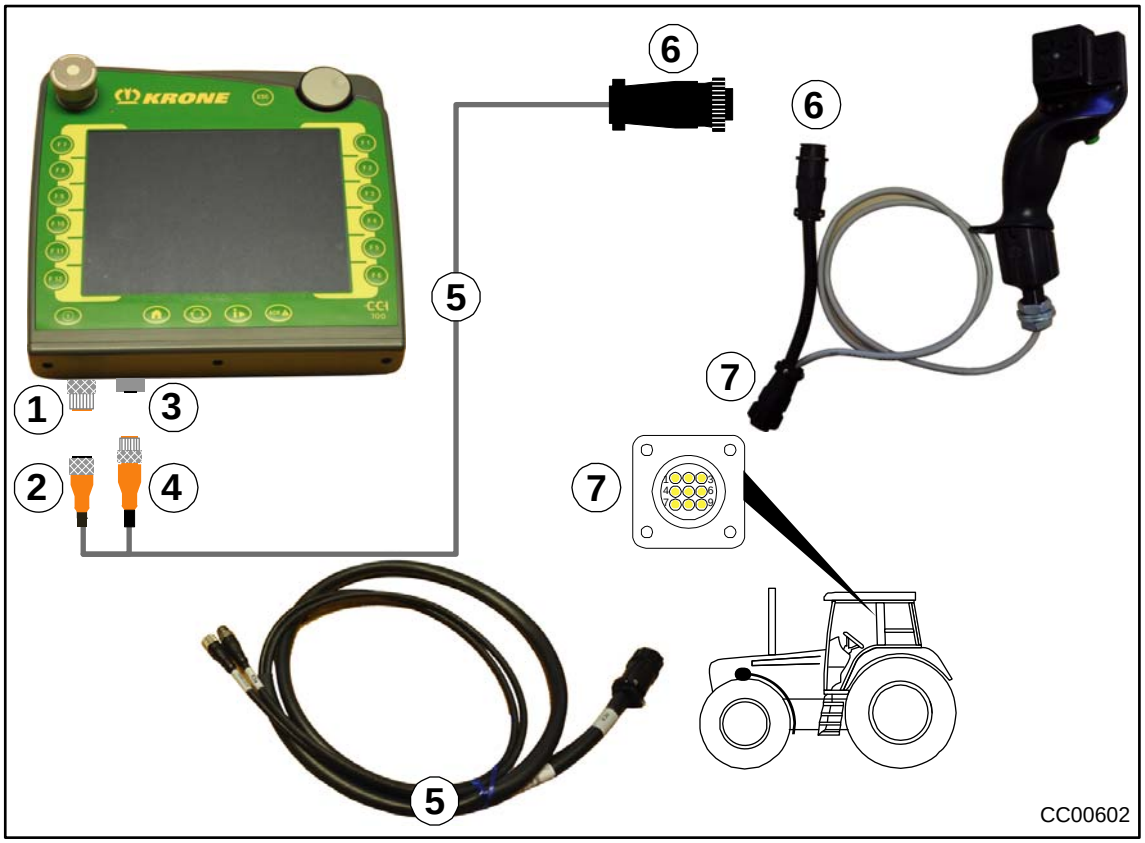


Fig. 74

Note

The connection of terminal to tractor is made via a special cable set (5) which can be ordered by stating the KRONE article no. 20 081 223 0.

- Connect plug (2) of cable set (5) with socket (1) (CAN1-IN) of the terminal
- Connect plug (4) of cable set (5) with socket (3) (CAN1-OUT) of the terminal
- Connect ISO plug (6) (9-pole) of cable set (5) with the ISO socket (6) (9-pole) of the multi-function lever
- Connect ISO plug (7) (9-pole) of multi-function lever with ISO socket (7) (9-pole) located in the tractor cabin

8.2.2 Connecting the Multi-Function Lever to the CCI Terminal (on tractors without ISOBUS system)

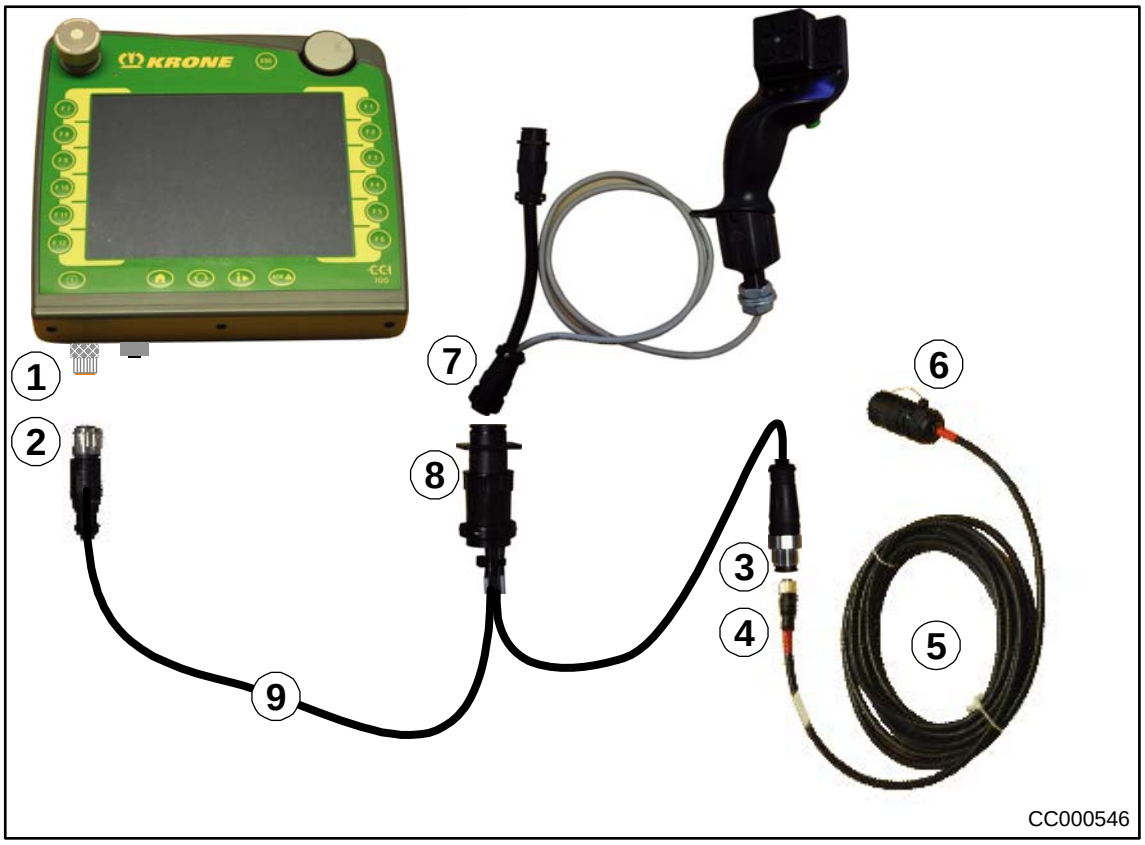


Fig. 75

Note

The terminal is connected to the multi-function lever via a special cable set (9) which can be ordered by stating the Krone product no. 20 081 676 0.

- Connect plug (2) of cable set (9) with the socket (1) (CAN1-IN) of the terminal
- Connect socket (3) of cable set (9) with the plug (4) of the cable set (5)
- Connect ISO plug (8) (9-pole) of cable set (9) with the ISO socket (7) (9-pole) of the multi-function lever
- Connect plug (6) (7-pole) of cable set (5) with the socket (7) (7-pole) of the machine

8.2.3 Switching the terminal on / off when the machine is not connected

Fig. 76

Note

Before switching the terminal on for the first time make sure that the connections on the device are fastened right and securely.

By pressing and holding (for approx. 2 sec.) the key (1) (ON/OFF) the terminal will be switched on or off.

Note

For further information on the functioning of the ISOBUS terminal CCI refer to the terminal operating instructions included with delivery.

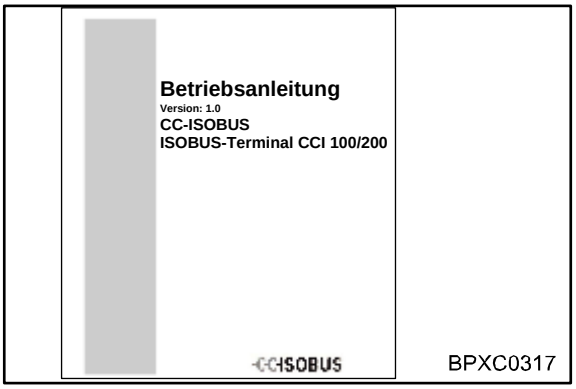


Fig. 77

8.2.4 Switching the terminal on / off when the machine is connected

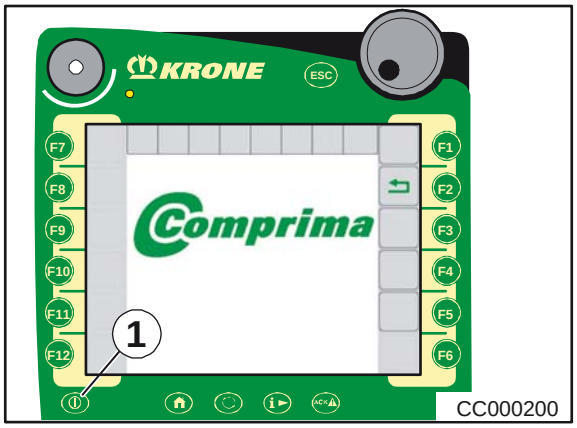


Fig. 78

Note

Before switching the terminal on for the first time make sure that the connections on the device are fastened right and securely.

By pressing and holding (for approx. 2 sec.) the key (1) (ON/OFF) the terminal will be switched on or off.

Note - Prior to first use

When switching on for the first time the configuration of the specific menu of the machine is uploaded into the terminal. The loading may take a few minutes. The configuration will be saved on the memory of the terminal.

Note

For further information on the functioning of the ISOBUS terminal CCI refer to the terminal operating instructions included with delivery.

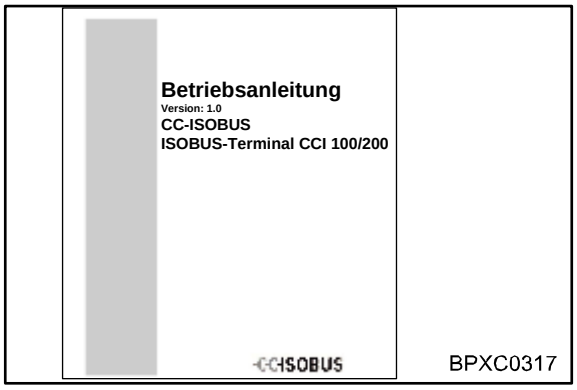


Fig. 79

- The “start-up screen” is shown in the display after the loading process

The terminal is now ready for operation.

- By pressing the function key the basic screen appears.

8.3 Basic Screen

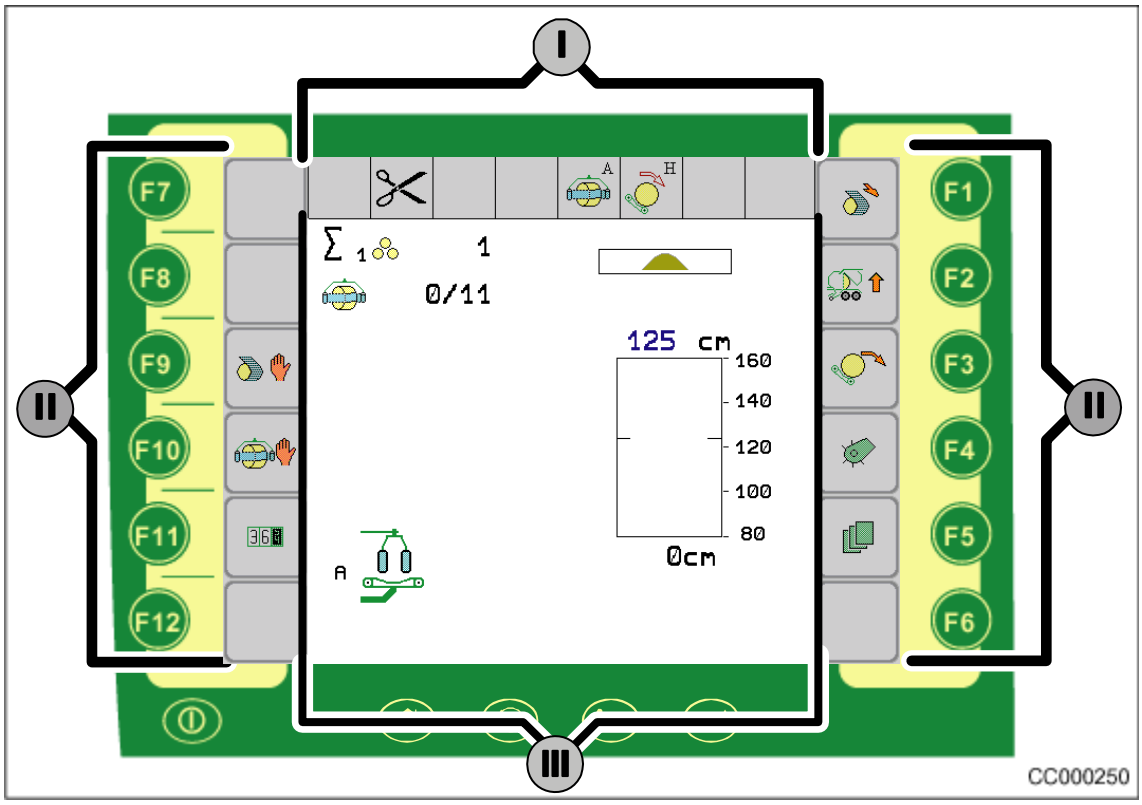
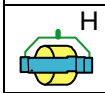
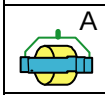
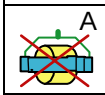
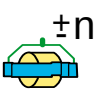


Fig. 80

Status line (I)

Current states of the machine (depending on how it is equipped) are shown in the top line of the display:

	Alarm message is pending
	Blades are swivelled in
	Blades are not swivelled in
	Pre-signalling set
	Transfer / wrapper mode “Manual with wrapping”
	Transfer/ wrapper mode “Automatic with wrapping”
	Transfer / wrapper mode “Manual without wrapping“
	Transfer / wrapper mode "Automatic without wrapping“
	Transfer / wrapper mode “Manual with wrapping”
	Selection set-down mode “Automatic” or
	Set-down mode “Automatic without wrapping double leading”
	Number of sheets winds not to standard

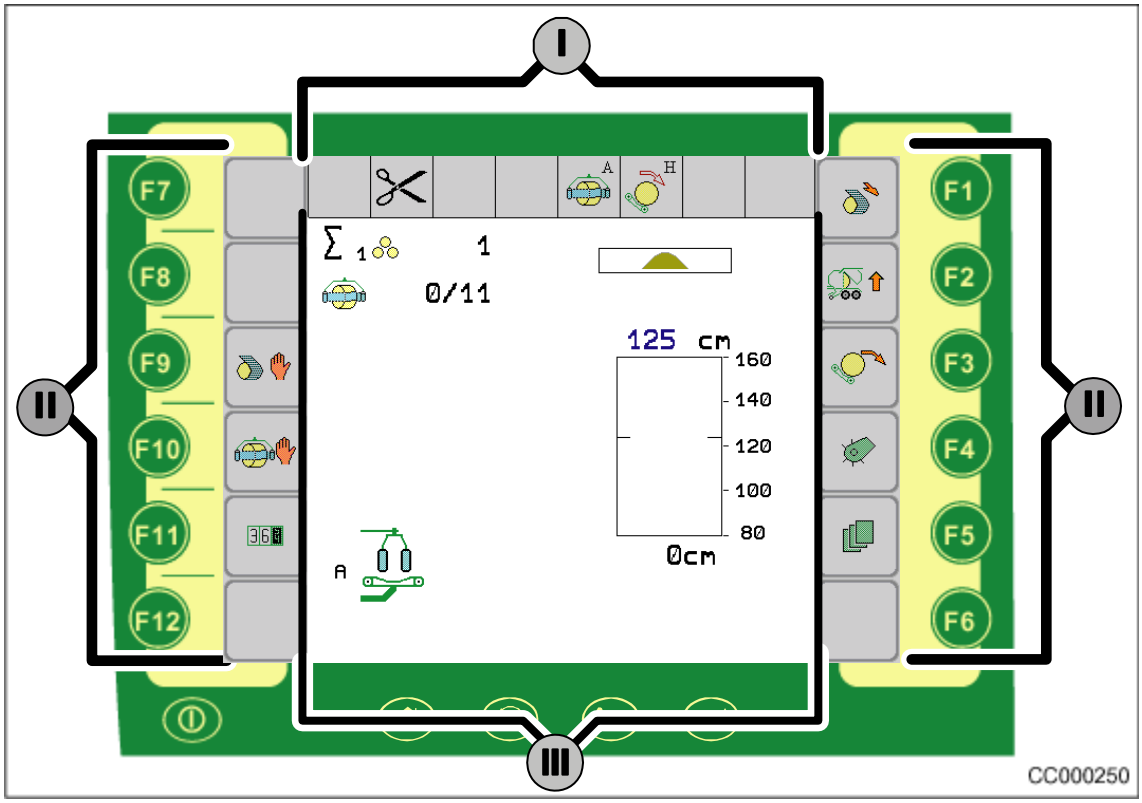
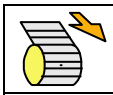
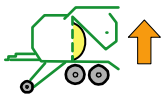
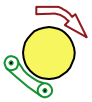
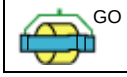
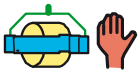


Fig. 81

Description of the symbols (II) for the function keys (F1 to F6)

	Net feeding manual mode	Net is fed when actuating the function key
	Start transfer / wrapper mode	The transfer and if required the wrapping process are started if the function key is activated.
	Start setting down bales	The depositing of the bale is started manually if the function key is activated.
	Pre-select pick-up valve	The activated setting is shown.
	Pre-select valvecutter base adjustment	
	Menu level of the machine	By actuating the function key the menu level of the machine will be called.
	Start/ continue wrapping process	The wrapping process **start/**is continued when the function key is activated

Description of the symbols (II) for the function keys (F7 to F12)

	Tying mode, manual triggering (net)	The current status is displayed
	Tying mode, automatic triggering (net)	
	Manual operation	The main menu “manual operation” is active when the function key is activated.
	Setting the customer counter	The menu 2-1 "Customer counter" is displayed when actuating the function key (for settings see menu 2-1 "Customer counter”).
	Release holding arms	The holding arms are released when the function key is activated (only for recognized torn sheet)
	Close holding arms	When the function key is pressed, the holding arms are closed (only for recognized torn sheet).

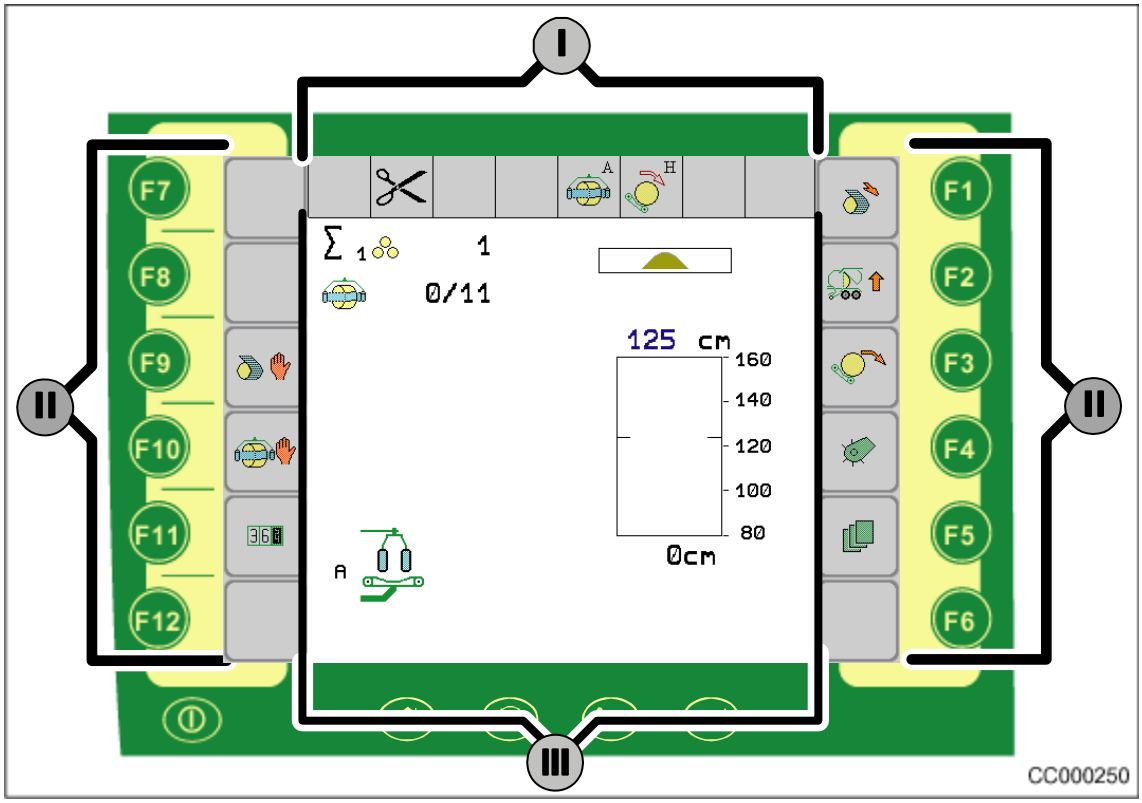


Fig. 82

Displays in the main window (III) (depending on how the machine is equipped)

2	activating customer counter
	Set bale diameter (only Comprima CF155XC)
	Wrapping progress

Tying analysis display

	Value of bale diameter/bale firmness reached (flashing)
2N	Net is fed
4N	Net tying process is active
6N	Net has been cut off
3N	Net has not been tied
7N	Net has not been cut off
8N	Net tying process has finished

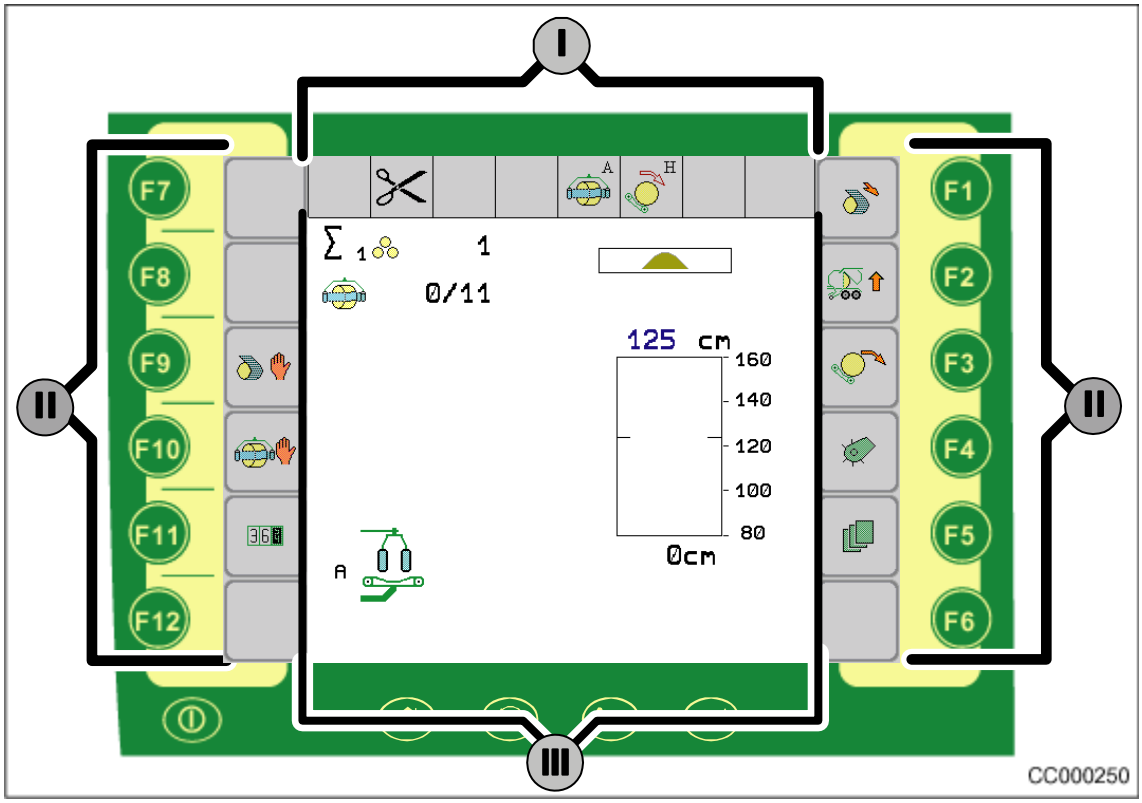


Fig. 83

Wrapper analysis display

A Swivel table centre without bale

B Swivel table forward without bale

C Swivel table rear without bale

D Swivel table forward with bale

E Swivel table centre with bale

F Swivel table rear with bale

G **H** Wrapping process active

I 1/2 **J** 1/2 Wrapping process running at half speed in case of an one-sided sheet tear monitoring (see Chapter entitled Sheet Tear Monitoring)

Note
If the indications for the direction of motion are too strong or too weak, they can still be adjusted (see menu “Sensitivity of direction display”).

Only for Comprima CF155XC

Direction of travel window

Arrows (1) left/right from the display. The arrows (1) have three different sizes, numbered with 1-3.
They show the driver to which side he must correct the direction and how far when driving over a swath, to ensure the bale chamber is filled evenly.

Note
If an even filling is reached, all signals expire.

8.3.1 Adjustment of bale firmness (display for Comprima CF 155 XC)

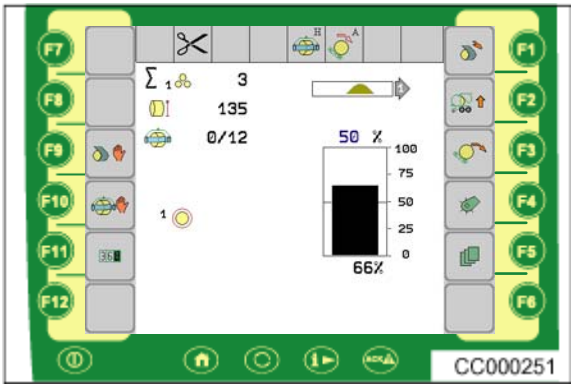


Fig. 84

The value under the bar display and the height of the bar show the current actual bale firmness as a %. The value above the bar display and the arrows in the bar display show the set target bale firmness as a %.

The bale diameter is given by the user in basic screen.

- You can use the scroll wheel to select the desired value (the selection box is highlighted in colour)
- Pressing the scroll wheel allows you to jump to the selection box (the selection box is highlighted in colour)
- Turning the scroll wheel increases or reduces the value
- Pressing the scroll wheel causes the setting to be applied and returns you from the selection box

8.3.2 Adjustment of target bale diameter (display for Comprima CV150XC)

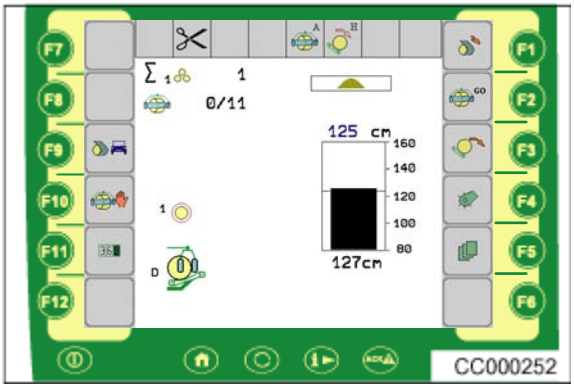


Fig. 85

Display bale diameter

The value under the bar display and the height of the bar show the current actual bale diameter in cm.
The value above the bar display shows the adjusted target bale diameter in cm.

The bale diameter is given by the user in basic screen.

- You can use the scroll wheel to select the desired value (the selection box is highlighted in colour)
- Pressing the scroll wheel allows you to jump to the selection box (the selection box is highlighted in colour)
- Turning the scroll wheel increases or reduces the value
- Pressing the scroll wheel causes the setting to be applied and returns you from the selection box

8.3.3 Adjusting the Target Bale Diameter (Display for Comprima CV 210 XC)

Note
If the wrapper is deactivated, the bale size is shown in an area of 90 cm to 205 cm. It can be set in this area.

Note
If the wrapper is activated, the bale size is displayed in an area of 90 cm to 175 cm. It can be set in this area.

8.4 Messages

Information message

The information message will appear only, if the main operation display has been set. The message will disappear automatically, when the cause for the information message has been removed.

Message bale chamber has not been closed

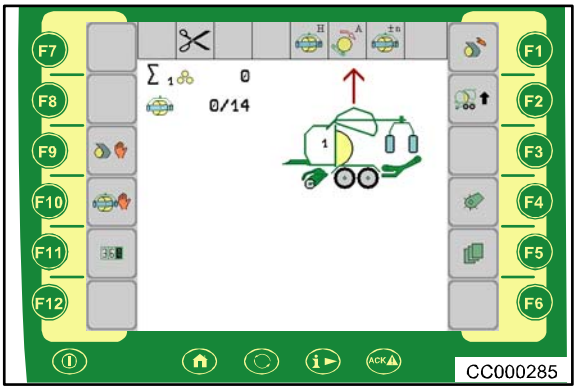
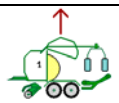
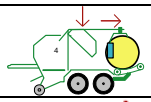
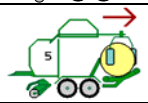
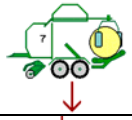
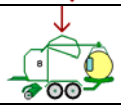
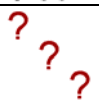


Fig. 86

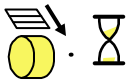
The softkeys in the lower line continue to be active whilst the information message is displayed.

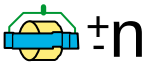
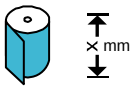
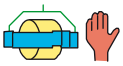
The following information messages are possible:

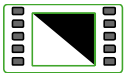
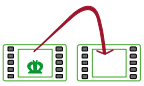
Symbol	Designation
	Bale chamber opens
	Bale chamber open Lifter forward without bale Swivel table forward without bale
	Transfer complete
	Bale chamber is closed Swivel table moving to centre position
	Swivel table moving to centre position
	Lifter moving forward
	Bale chamber is closed
	not defined

8.5 Menu level

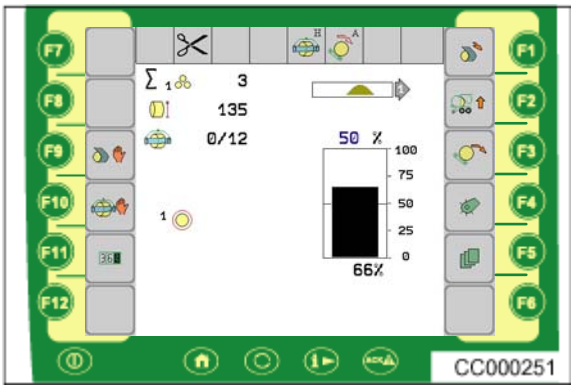
8.5.1 Short overview

Main menu	Sub-menu	Sub-menu	Designation
1			Settings
	1-2		Baler setting
		1-2-2	Bale diameter (Comprima CF155 XC only)
		1-2-3	Number of net wrappings
		1-2-4	Sensitivity of direction display (Comprima CF155 XC only)
		1-2-5	Advance signalling
		1-2-6	Filling correction
		1-2-9 	Tying start delay

Main menu	Sub-menu	Sub-menu	Designation
1			Settings
	1-3		Wrapper setting
		1-3-1	Number of layers
		1-3-2 	Number of film wrappings
		1-3-3	Type of operation for wrapper
		1-3-4	Type of operation for swivel table
		1-3-5 	Film width
		1-3-6	Film tear control
2			Counter
	2-1		Customer counter
	2-2		Total counter
3 			Manual operation

Main menu	Sub-menu	Sub-menu	Designation
4			Service
	4-2		Manual sensor test
	4-4		Manual actuator test
	4-8		Diagnostics
	4-9		Manual operation without safety prompt
5			Info
6			Technician
7			ISOBUS
	7-1		Virtual terminal (VT)
		7-1-1 	Select day/night display lighting
		7-1-3	Softkeys ISO terminal
		7-1-4 	Switch to different terminal
	7-4		ISOBUS diagnostics
		7-4-2	"Auxiliary" function (AUX) diagnostics

8.5.2 Calling up the menu level



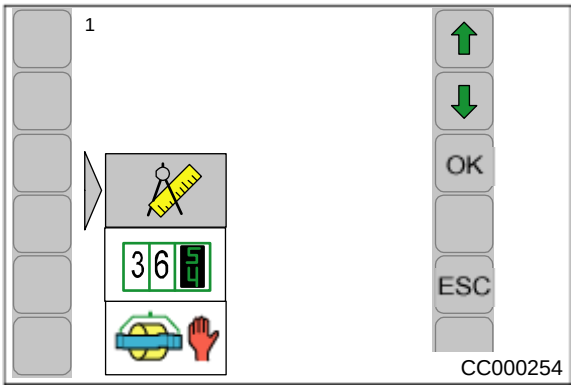
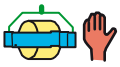


Fig. 87

By pressing the function key in the main window you get into the menu level of the machine.

The menu level is shown in the display.

The menu level is divided into 7 main menus:

	main menu 1 "Settings"
	main menu 2 "Counters"
	main menu 3 "Manual operation"
	main menu 4 "Service"
	main menu 5 "Info"
	main menu 6 "Fitter"
	main menu 7 "ISOBUS"

Select the desired main menu by pressing the function key or . The selected symbol is highlighted in grey.

- Pressing the function key **OK** brings up the menu level of the main menu that is selected.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key **ESC** and holding it down brings up the basic screen.

8.6 Main menu 1 Settings

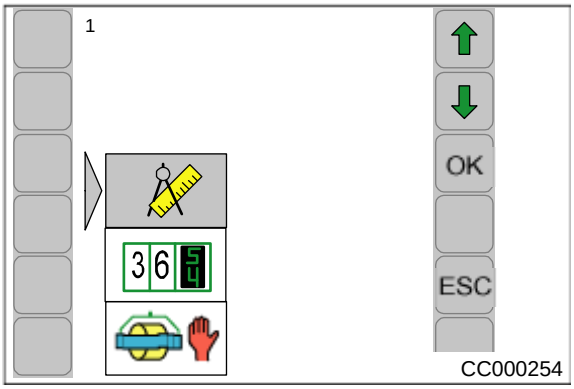


Fig. 88

- By pressing the function key in the basic screen you get into the menu level of the machine.
- You can select the main menu 1 by pressing the function key or . The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu level 1 "Settings". Menu level 1 "Settings" is divided into up to 5 menus, depending on how the machine is equipped:

Menu 1-2 "Baler setting"

Menu 1-3 "Wrapper setting“

8.7 Menu 1-2 Adjustment baler

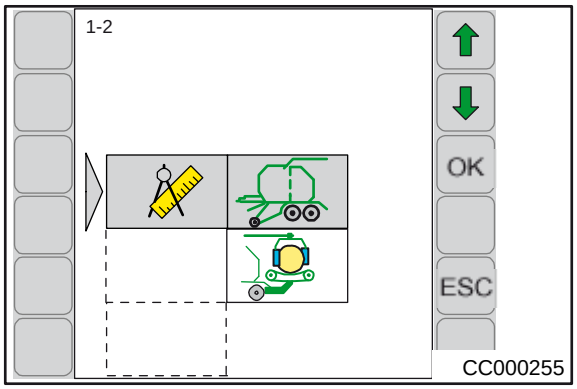


Fig. 89

Displaying the menu

Main menu 1 “Settings” is displayed.

- Select menu 1-2 by pressing function key ↓ or ↑, the symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-2 "Baler setting".

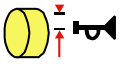
The symbol in the upper line indicates that the displayed status is saved.

Menu 1-2 "Baler setting" is divided into seven menus, depending on how the machine is equipped:

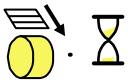
Menu 1-2-2 “Bale diameter” (Comprima CF 155 XC)

Menu 1-2-3”Number net winds”

Menu 1-2-4 “Sensitivity of direction display” (Comprima CF 155 XC)

 Menu 1-2-5 “ Pre-signalling”

Menu 1-2-9 “Filling correction”

 Menu 1-2-9 “Tying start deceleration”

8.7.1 Menu 1-2-2 Bale diameter (Only for Comprima CF155XC)

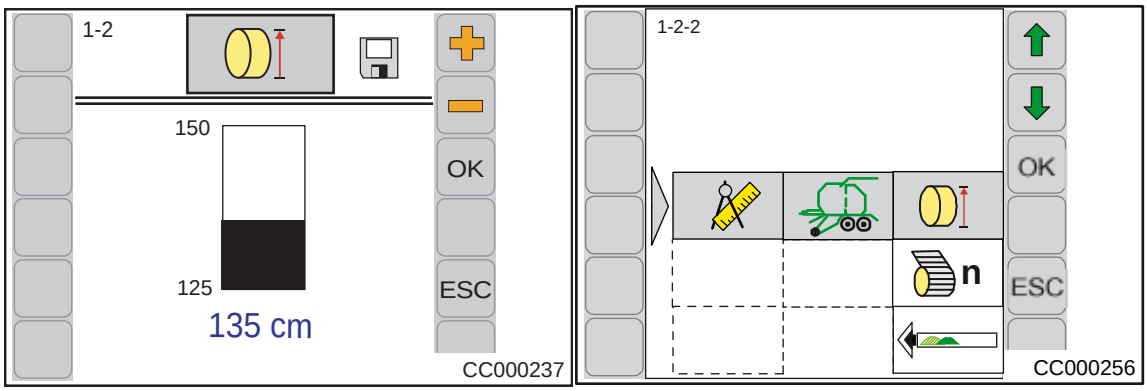


Fig. 90

Displaying the menu

Menu 1-2 "Baler setting" is called.

- Select menu 1-2-2 by pressing function key or , the symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-2-2 “Bale diameter".

The symbol in the upper line indicates that the displayed status is saved.

Setting the bale diameter

- You can use function key or to adjust the bale diameter mechanically set on the machine. The symbol in the top line disappears.
- Press the function key **OK**. The bale diameter set is saved and the symbol appears in the upper line.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key **ESC** and holding it down brings up the basic screen.

8.7.2 Menu 1-2-3 Number net winds

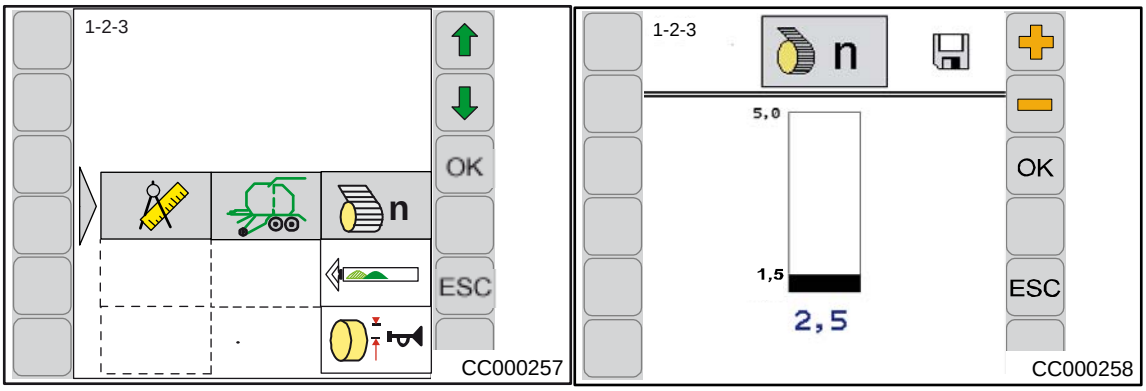


Fig. 91

Displaying the menu

The main menu 1-2 "Settings" is active.

- You can select menu 1-2-3 n by pressing function key ↑ or ↓. The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-2-3 "Number of net winds".

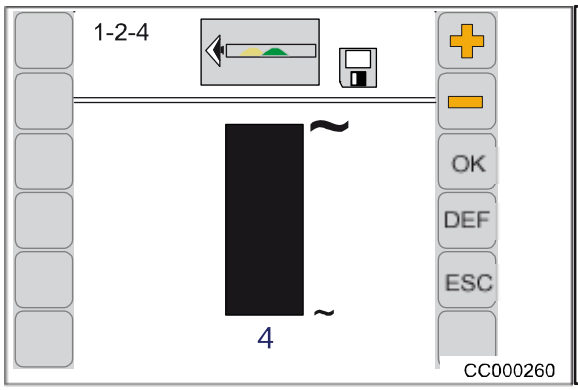
The symbol in the upper line indicates that the displayed status is saved.

Setting the number of net winds

The number of net wrappings is indicated in revolutions (e.g. 3n).

- Set the desired number of net winds with function key + or −. The symbol in the top line disappears.
- Press function key **OK**, the adjusted status is saved, the symbol in the upper line appears.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key longer **ESC** and holding it down brings up the basic screen.

8.7.3 Menu 1-2-4 Sensitivity of the Direction Display (Only Comprima CF155)



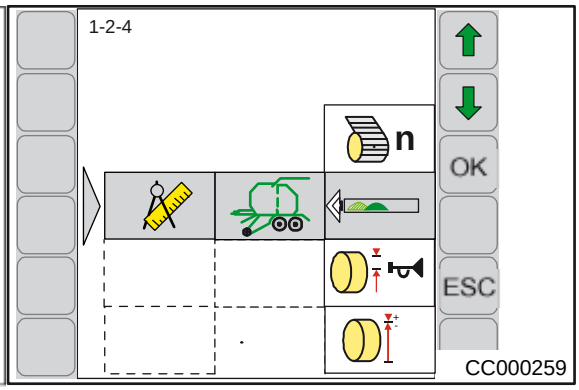


Fig. 92
Setting the sensitivity of the direction display

Calling the Menu

The main menu 1-2 "Settings" is called.

- Select menu 1-2-4 by pressing function key ↑ or ↓, the symbol is highlighted in grey.
- Press function key **OK**

The display shows menu 1-2-4 “Sensitivity of the Direction Display”.
The bar display shows the set sensitivity. The higher the bar, the greater the sensitivity of the direction display. The symbol in the upper line indicates that the displayed value is saved.

Setting and Saving the Sensitivity of the Direction Display (Comprima F155).

The higher the sensitivity of the direction display is set, the stronger the indications for the direction of motion in the form of arrows (1) ( ).

- Set the sensitivity by using function key + or −, the symbol in the top line goes out
- Press function key **OK**, the set sensitivity is saved, the symbol in the upper line appears
- The called up menu is closed by pressing function key **ESC**
- Pressing the function key **ESC** and holding it down brings up the basic screen

Note
If an even filling is reached, all signals expire.

8.7.4 Menu 1-2-5 Pre-signalling

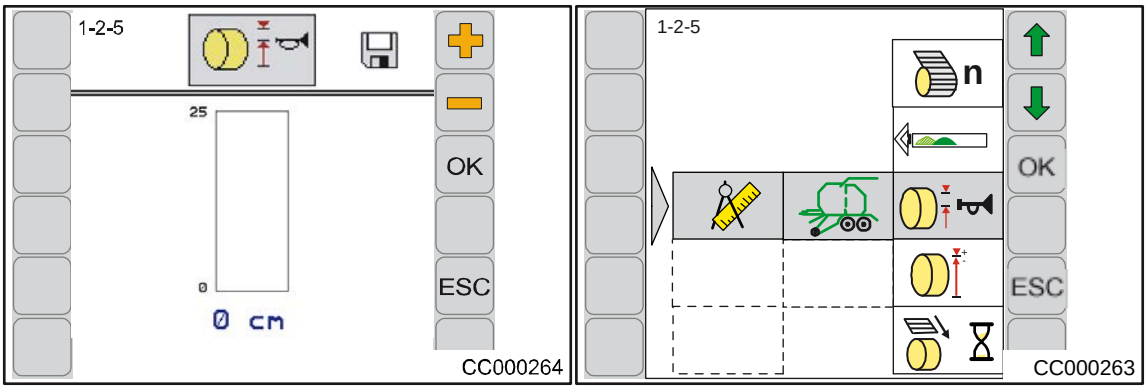


Fig. 93

Displaying the menu

Menu 1-2 "Baler setting" is called.

- You can select menu 1-2-5 by pressing function key or . The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-2-5 "Pre-signalling".

The symbol in the upper line indicates that the displayed value is saved.

Note

Pre-signalling indicates how far in advance it is signalised that the bale has reached the “final diameter”.

- Set the desired time delay with the function key or , the symbol in the top line goes out.
- Press the function key **OK**, the adjusted time delay is saved, the symbol in the upper line appears.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key longer **ESC** and holding it down brings up the basic screen.

8.7.5 Menu 1-2-6 Filling Correction

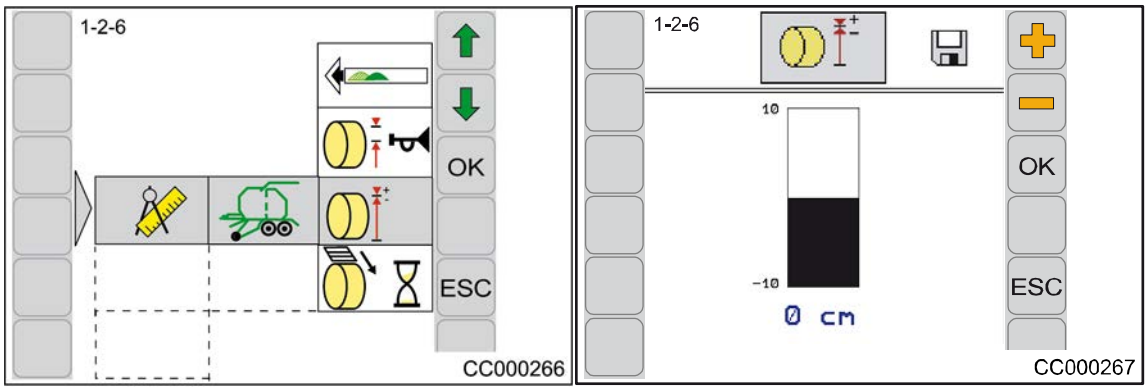


Fig. 94

Note

If the bale size is not reached or if it is too high, the bale can be corrected in a predefined range via menu 1-2-6 “Filling Correction”.

The values can be corrected in the following ranges:

Comprima CV150 XC/CV210 XC

Bale size: -10cm to +10 cm

Calling the menu

Main menu 1-2 “Setting Baler" is called.

Example for the correction of bale diameter:

The set target diameter is 108 cm.

If the actual bale diameter is only 100 cm (the set target diameter is 108 cm), a correction value of + 8 cm must be set.

This means:

Correction value = bale diameter - target diameter

- Select menu 1-2-6 by pressing function key or , the symbol is highlighted in grey.
- Increase or reduce the desired value via function key or , the symbol in the upper line disappears
- Press function key **OK**

The display shows menu 1-2-6 “Filling Correction”.

The symbol in the upper line indicates that the displayed value is saved.

- Pressing function key **ESC** closes the called up menu
- The basic screen is called by pressing function key **ESC** longer

8.7.6 Menu 1-2-9 Tying start delay

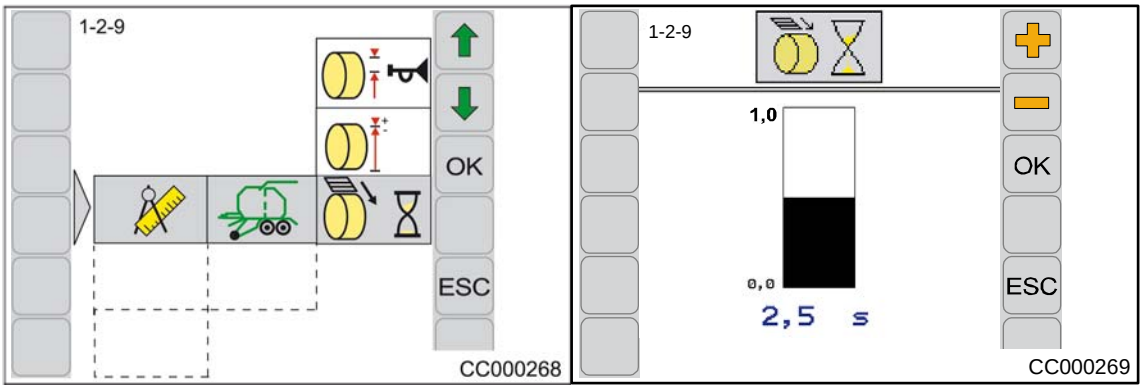
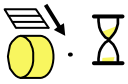


Fig. 95

Displaying the menu

Main menu 1-2 "Baler setting" is called.

- You can select menu 1-2-9  by pressing function key ↑ or ↓. The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-2-9 "Tying start delay".

Setting the tying start delay

The time delay is shown in seconds.

Note

Tying start delay indicates how much time there is between “Pressure /bale diameter reached” and “Triggering the tying process” (in automatic mode).

- Set the desired time delay with the function key + or −, the symbol in the top line goes out.
- Press function key **OK**.

The symbol in the upper line indicates that the displayed value is saved.

- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key longer **ESC** and holding it down brings up the basic screen.

8.8 Menu 1-3 Adjustment wrapper

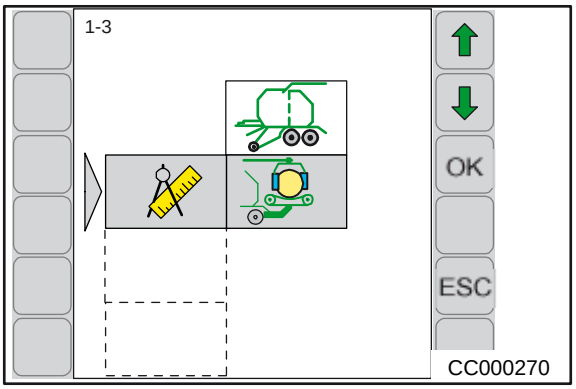


Fig. 96

Displaying the menu

Main menu 1 “Settings” is displayed.

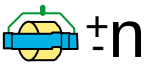
- You can select menu 1-3 by pressing function key ↑ or ↓. The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-3 "Wrapper setting".

The symbol in the upper line indicates that the displayed status is saved.

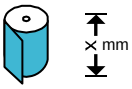
Menu 1-3 "Baler setting" is divided into six menus, depending on how the machine is equipped:

Menu 1-3-1 „Number of layers“

 Menu1-3-2 „Number of winds “

Menu 1-3-3 "Type of operation wrapper"

Menu 1-3-4 "Type of operation swivel table"

 Menu 1-3-5 "Sheet width"

Menu 1-3-6 "Sheet tear monitoring"

8.8.1 Menu 1-3-1 Number of layers

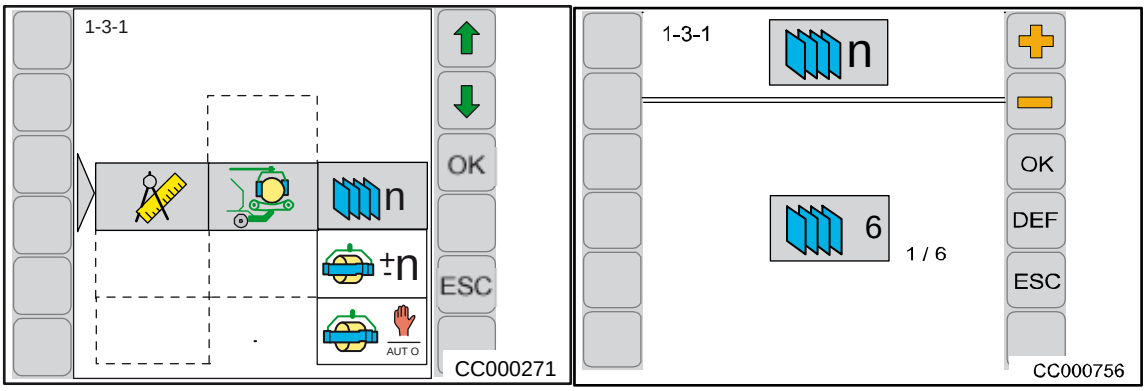


Fig. 97

Displaying the menu

Menu 1-3 "Wrapper setting" is called.

- Select the menu 1-3-1 n by pressing the function key ↑ or ↓. The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-3-1 "Number of layers".

Adjusting the number of layers

The time delay is shown in seconds.

Note

How many layers will be applied.

- Set the desired number of layers via function key + or − .The symbol in the upper line goes out.
- Press function key **OK**.

The symbol in the upper line indicates that the displayed value is saved.

- Use softkey DEF to reset the operating mode to the factory setting.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key longer **ESC** and holding it down brings up the basic screen.

8.8.2 Menu 1-3-2 Number slide wrappings

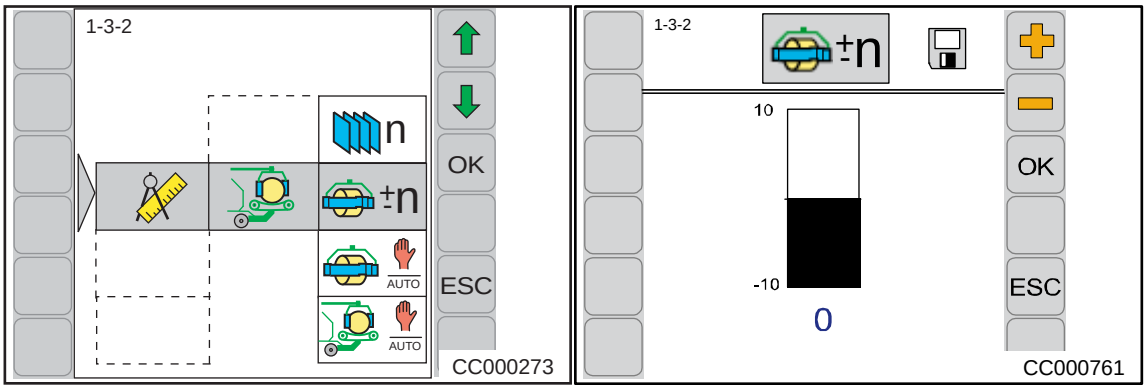


Fig. 98

Displaying the menu

Menu 1-3 "Wrapper setting" is called.

- You can select menu 1-3-2 ±n by pressing function key ↑ or ↓. The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-3-2 "Number of slide wrappings".

Adjust the number of slide wrappings

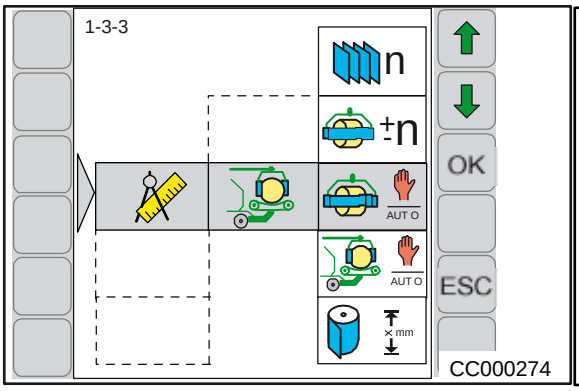
Note
With the number of slide wrappings you can adjust, about how many wrappings the actual number of the wrappings should distinguish from the specified number of wrappings.

- Increasing positive values correspond to more revolutions.
- Negative values correspond to fewer revolutions.
- Set the desired number of layers via function key + or − .The symbol 💾 in the upper line goes out.
- Press function key **OK**.

The symbol 💾 in the upper line indicates that the displayed value is saved.

- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key longer **ESC** and holding it down brings up the basic screen.

8.8.3 Menu 1-3-3 Type of operation wrapper



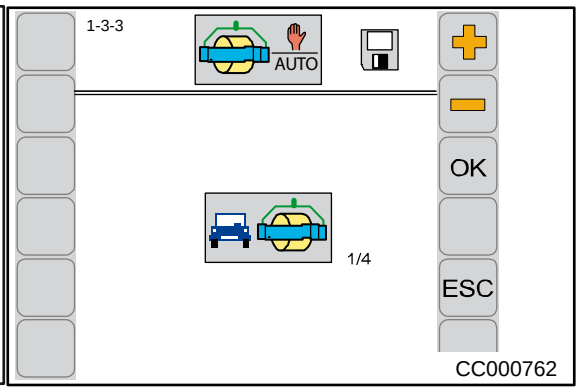


Fig. 99

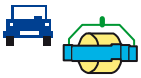
Displaying the menu

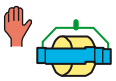
Menu 1-3 "Wrapper setting" is called.

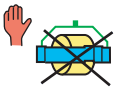
- You can select menu 1-3-3 (AUTO) by pressing function key ↑ or ↓. The symbol is highlighted in grey.
- Press function key **OK**.

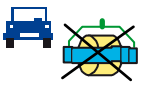
The display shows menu 1-3-3 "Type of operation for wrapper".

The current status is displayed as an icon:

 = Automatic start of transfer with wrapping

 = Manual start of transfer with wrapping

 = Manual start of transfer without wrapping

 = Automatic start of transfer without wrapping

Change and save status

- Set the desired number of layers via function key + or − .The symbol in the upper line goes out.
- Press function key **OK**.

The symbol in the upper line indicates that the displayed value is saved.

- Use softkey DEF to reset the operating mode to the factory setting.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key longer **ESC** and holding it down brings up the basic screen.

8.8.4 Menu 1-3-4 Type of operation swivel table

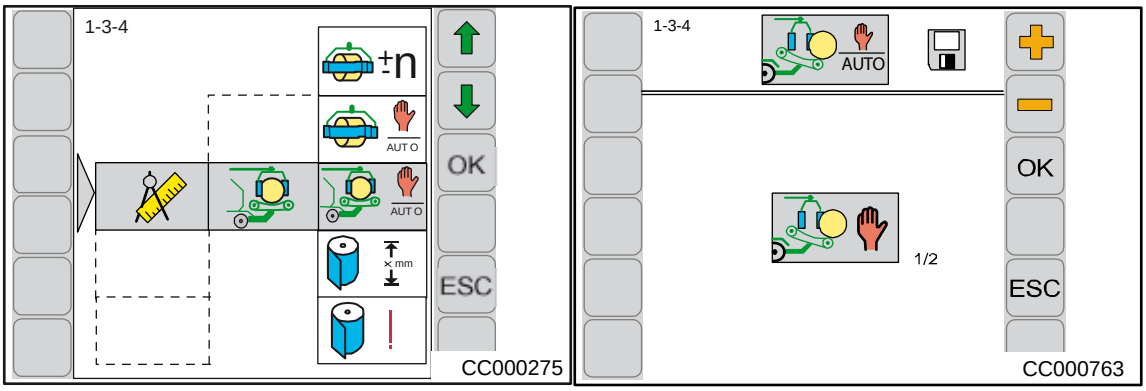


Fig. 100

Displaying the menu

Menu 1-3 "Wrapper setting" is called.

- You can select menu 1-3-4 by pressing function key ↑ or ↓. The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-3-4 "Type of operation swivel table".

The current status is displayed as an icon:

Manual mode

Selection automatic mode with wraps or

double depot without wrappings

Change and save status

- Set the desired number of layers via function key + or − .The symbol in the upper line goes out.
- Press function key **OK**.

The symbol in the upper line indicates that the displayed value is saved.

- Use softkey DEF to reset the operating mode to the factory setting.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key longer **ESC** and holding it down brings up the basic screen.

8.8.5 Menu 1-3-5 Sheet width

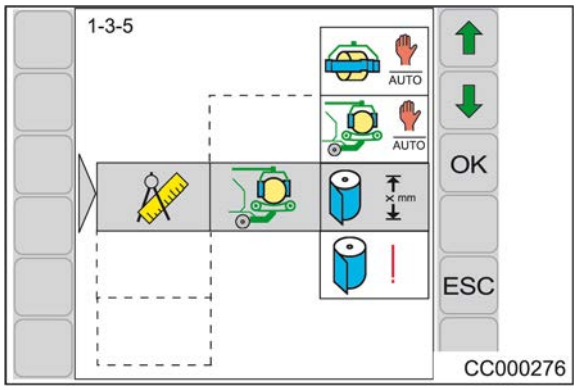
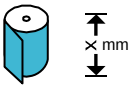


Fig. 101

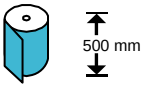
Displaying the menu

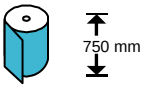
Menu 1-3 "Wrapper setting" is called.

- You can select menu 1-3-5  by pressing function key ↑ or ↓. The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-3-5 "Sheet width".

The current status is displayed as an icon:

 Sheet width 500 mm

 Sheet width 750 mm

Change and save status

- Set the desired number of layers via function key + or − .The symbol 💾 in the upper line goes out.
- Press function key **OK**.

The symbol 💾 in the upper line indicates that the displayed value is saved.

- Use softkey DEF to reset the sheet width to the factory setting.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key longer **ESC** and holding it down brings up the basic screen.

8.8.6 Menu 1-3-6 Torn sheet control

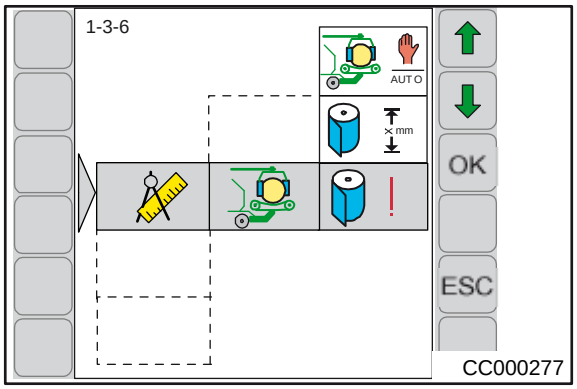


Fig. 102

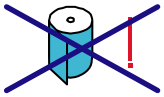
Displaying the menu

Menu 1-3 "Wrapper setting" is called.

- You can select menu 1-3-6 by pressing function key ↑ or ↓. The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 1-3-6 "Sheet tear monitoring".

The current status is displayed as an icon:

 = No sheet tear monitoring

= Stop for sheet tear

allow one-sided sheet tear

Note

Allow one-sided sheet tear means that the wrapping process is continued after a one-sided sheet tear with accordingly changed values. The nominal speed has to be observed, when a one-sided sheet tear is existent (540 U/min).

The “one-sided sheet tear” message appears after the wrapping process is complete.

Change and save status

- Set the desired status via function key + or −, the symbol in the upper line goes out.
- Press function key **OK**.

The symbol in the upper line indicates that the displayed value is saved.

- Use softkey DEF to reset the sheet tear monitoring to the factory setting.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key longer **ESC** and holding it down brings up the basic screen.

Insert new sheet if sheet is torn

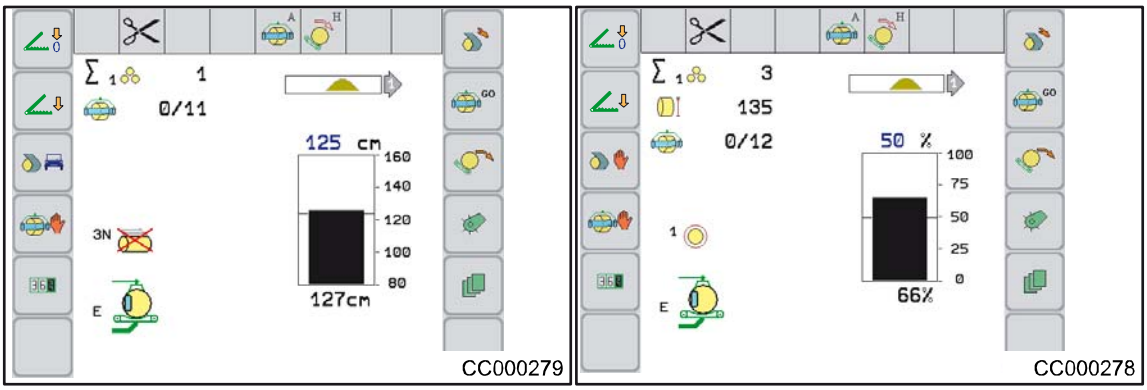


Fig. 103 Comprima CF155XC Comprima CV150XC/CV210XC

Note
The basic screen “Sheet tear” is displayed in the event of a sheet tear alarm during wrapping.

- The softkey 0 can be used to release the holding arms.
- Insert the starting end of the sheet in the clamping device. (refer to chapter Operation “Inserting Sheet”)
- Activate softkey until the holding arms have reached the closed end position.
- Continue wrapping process by activating the softkey GO .

8.9 Main menu 2 Counters

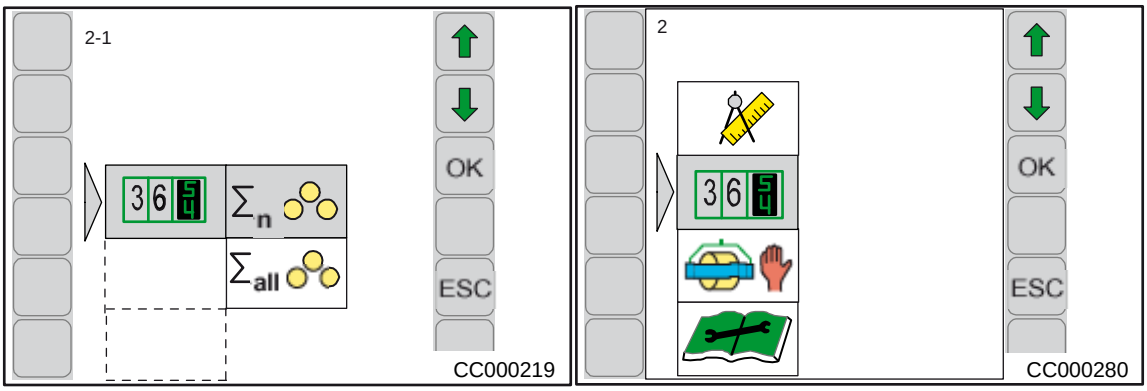


Fig. 104

Calling the main menu

- By pressing the function key in the basic screen you get into the menu level of the machine.
- You can select main menu 2 ( ) by pressing the function key or . The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu level 2 "Counters".

Menu level 2 "Counters" is divided into two menus:

Σ_n = Menu 2-1 "Customer counter"

Σ_{all} = Menu 2-2 "Total counters"

8.9.1 Menu 2-1 Customer counter

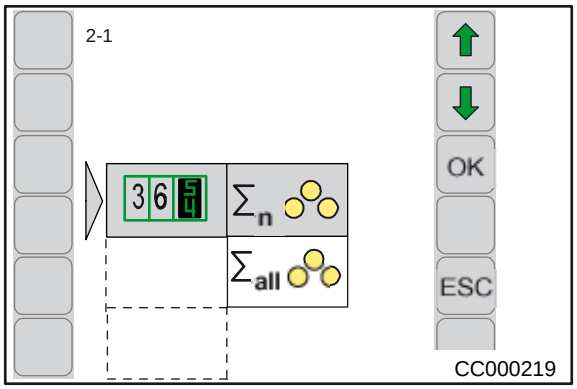


Fig. 105

Displaying the menu

Main menu 2 "Counters" is displayed

- You can select menu 2-1 by pressing function key or . The symbol is shown in reverse colours.
- Press function key **OK**.

The display shows menu 2-1 "Customer counter".

Meaning of the symbols:

= Total number of bales

1 = active customer counter (1 - 20)

h = Operating hours counter (counts only when P.T.O. shaft is running)

Activating customer counters

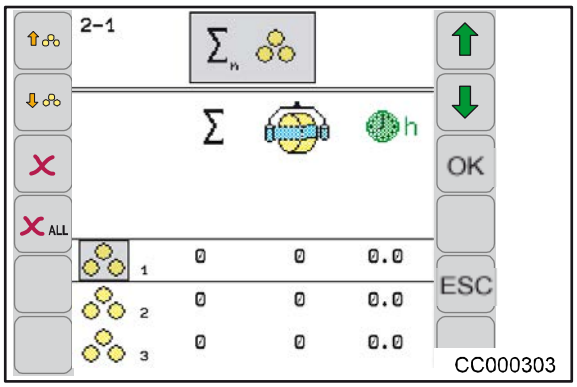


Fig. 106

- Press function key or to select the desired customer counter and activate by pressing the function key **OK**. The desired customer counter (in this case customer counter 1) is displayed inversely.

Changing the number of bales

- Press function key or to select the desired customer counter (the customer counter must not be activated)
- Increase the number of bales by pressing the function key .
- Reduce the number of bales by pressing the function key .

Deleting the customer counter

- Press function key or to select the desired customer counter (the customer counter must not be activated)
- By pressing the function key the selected customer counter is set to zero.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key **ESC** and holding it down brings up the basic screen.

8.9.2 Menu 2-2 Total bale counter

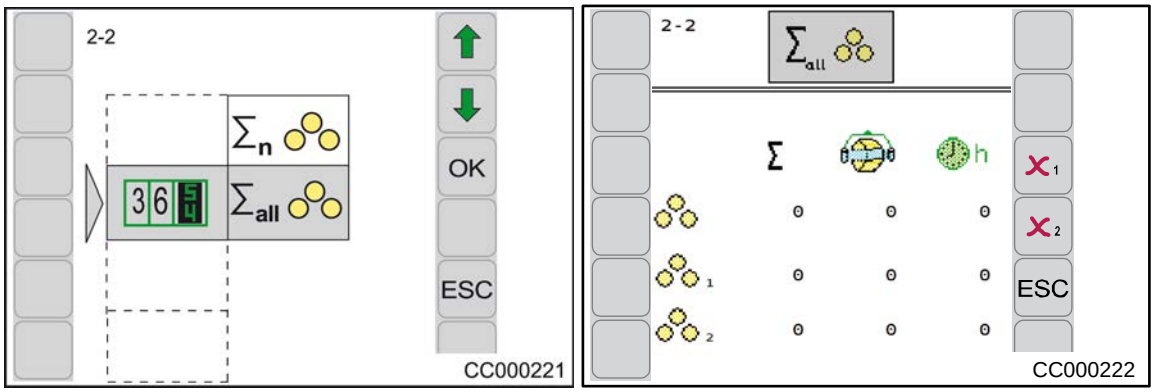


Fig. 107

Calling the menu

Main menu 2 "Counters" is displayed

- You can select menu 2-2 Σ_{all} by pressing function key ⬆ or ⬇. the symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu 2- 2 "Total bale counter". The total number of bales is the sum of all bales pressed. They are not assigned to any customer counter.

Meaning of the icons:

= Bale counters (cannot be deleted)

= Operating hours counter (counts only when P.T.O. shaft is running)

= Season counter 1 (can be deleted)

= Season counter 2 (can be deleted)

Deleting season counter 1 or daily counter 2

- Pressing the function key ✕1 sets season counter 1 to zero.
- Pressing the function key ✕2 sets season counter 2 to zero.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key **ESC** and holding it down brings up the basic screen.

8.10 Main menu 3 Manual operation

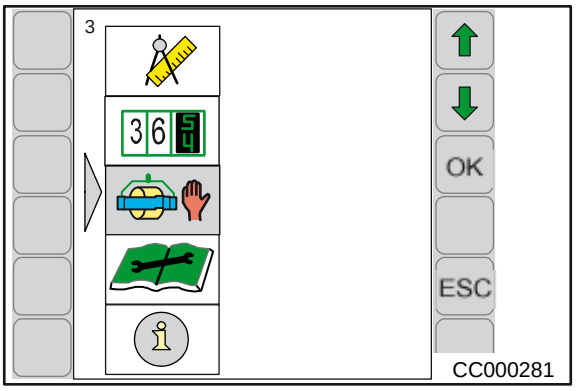


Fig. 108

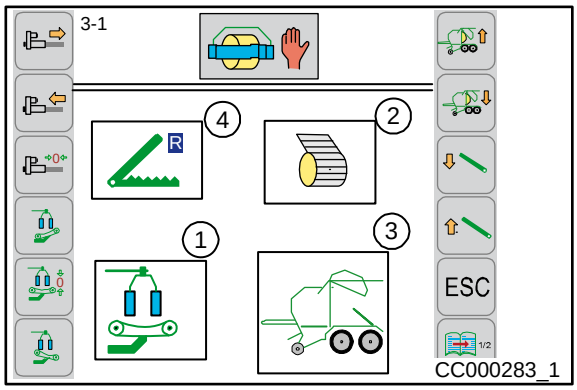
Calling the menu

- By pressing the function key in the basic screen you get into the menu level of the machine.
- You can select main menu 3 ( ) with function key or . The symbol is highlighted in grey.
- Press function key **OK**.

Menu level 3 "Counters" is divided into two menus:

- Menu 3-1 „Manual operation baler”, in case of an opened bale chamber
- Menu 3-2 „Manual operation wrapper“ in case of a closed bale chamber

8.10.1 Menu 3-1 „Manual operation baler"



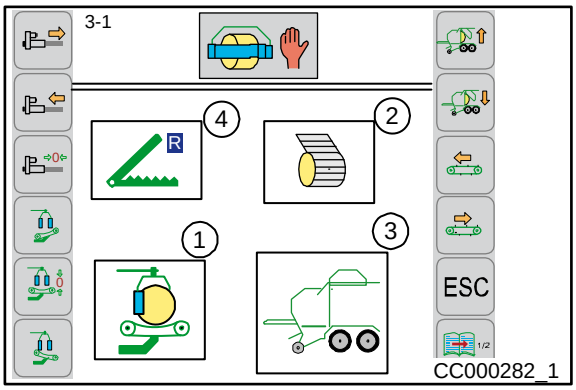


Fig. 109 Comprima CF155XC/CV210XC Comprima CV150XC

Calling the menu

Main menu 3 "Manual operation" is called

- You can select menu 3-1 ( ) by pressing function key or . The symbol is highlighted in grey.
- Press function key **OK**.

Show in the display

(1) = Display wrapping arm/swivel table

(2) = Display net motor

(3) = Bale chamber and lifter display

(4) = Holding arms display

8.10.2 Status messages

Note

The following status messages of the 4 indications in the display apply for menu 3-1 “Manual operation baler” for bale chamber opened as well as menu3-2 “Manual operation wrapper”for bale chamber closed. They are not listed once again.

Possible status messages window 1 (wrapping arms/swivel table)

=Wrapping arm not in position, swivel table forward, without bales

= Wrapping arm in position, swivel table centred, without bales

= Wrapping arm not in position, swivel table centred, without bales

= Wrapping arm in position, swivel table forward, without bales

= Wrapping arm not in position, swivel table centred, without bales

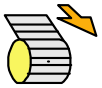
= Wrapping arm in position, swivel table centred, with bales

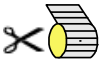
= Wrapping arm not in position, swivel table forward, with bales

= Wrapping arm in position, swivel table forward, with bales

Possible status messages window 2 (net motor)

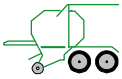
= Tying position reached


= Feed position reached

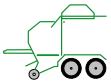

= Cut-off position reached

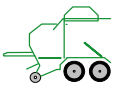
? = Positions not defined

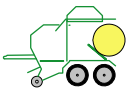
Possible status messages window 3 (bale chamber):

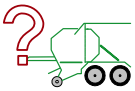

= Bale chamber closed

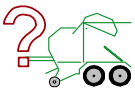
= Bale chamber not closed

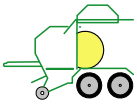

= Bale chamber open


= Bale chamber open, lifter not down


= Bale chamber open, lifter not down, bale on lifter


= Bale chamber closed, lifter not down


= Bale chamber not closed/ open, lifter not down


= Bale chamber open, lifter not down, bale on lifter

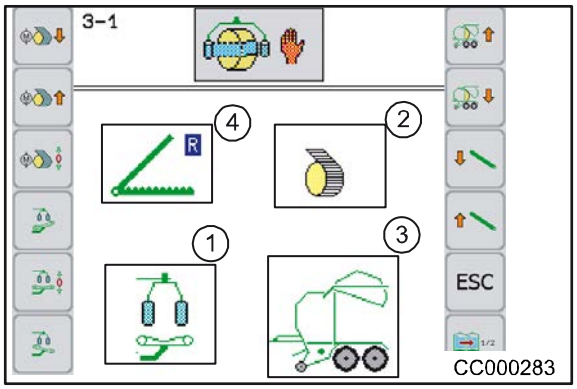
Possible status messages window 4 (holding arms):

= Holding arms open

= Holding arm left open

= Holding arm right open

8.10.3 Move manually to tying position



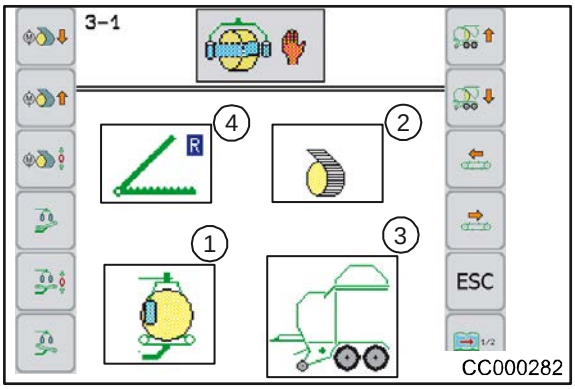
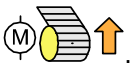
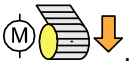


Fig. 110Comprima CF155XC Comprima CV150XC

- Drive engine in feed position by pressing function key  .
- Drive engine in cut-off position by pressing function key  .
- Drive engine in tying position by pressing function key .

Possible status messages window 2 (net motor), see chapter “Status messages”

8.10.4 Activating the wrapping table manually (only for Comprima CV150XC)

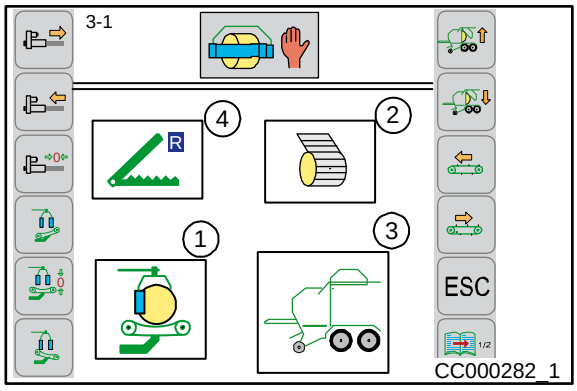


Fig. 111

- Using the softkey will make the wrapping table convey rearward for as long as the softkey is activated.
- Using the softkey will make the wrapping table convey rearward for as long as the softkey is activated.

8.10.5 Drive lifter manually upward/ downward (Comprima CF155XC/CV210XC)

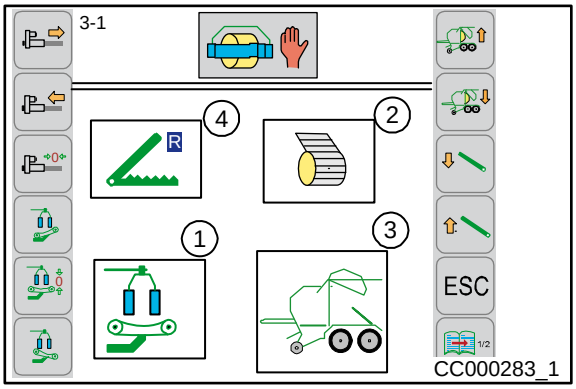


Fig. 112

- Use the softkey to move the lifter rearward as long as the softkey is activated or the top end position has been reached.
- Use the softkey to move the lifter forward as long as the softkey is activated or until the bottom end position is reached.

Possible status messages window 3 (bale chamber); see chapter “Status messages”.

8.10.6 Opening/closing the bale chamber

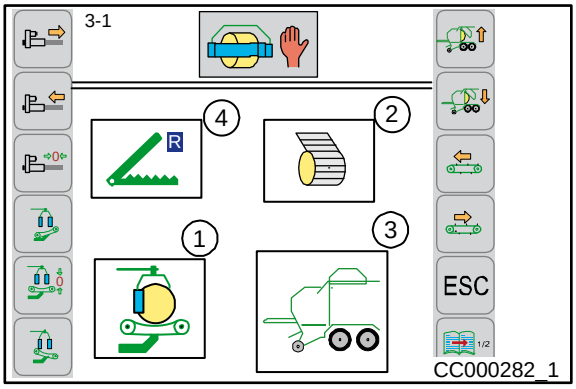


Fig. 113

- Softkey opens the bale chamber as long as the softkey is pressed or until the opened end position is reached.
- Softkey closes the bale chamber as long as the softkey is pressed or until the closed end position is reached.

Possible status messages window 4 (bale chamber) see Section "Status messages".

8.10.7 Move swivel table by hand

- Softkey moves the swivel table forward as long as the softkey is activated or until the forward end position is reached.
- Softkey moves the swivel table back as long as the softkey is activated or until the rear end position is reached.
- Press softkey and hold it down until swivel table has reached the zero position.
- Pressing the function key **ESC** closes the called up menu.
- Pressing the function key **ESC** and holding it down brings up the basic screen.

Possible status messages window 1 (wrapping arms/swivel table); see chapter “Status messages”.

8.11 Menu 3-2 Manual operation wrapper

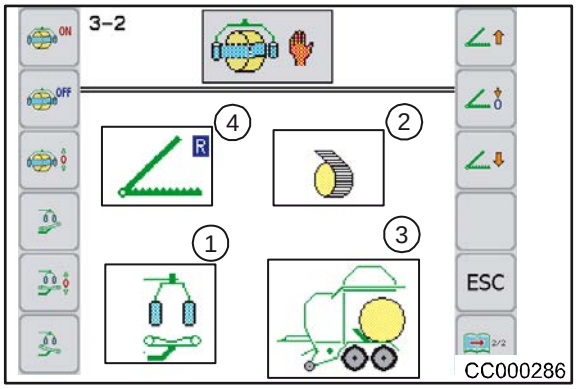


Fig. 114

Calling the menu

Menu 3-1 "Manual operation wrapper" is called.

- Activate the key to change to menu 3-2 "Manual operation wrapper" .

Show in the display

(1) = Display wrapping arm

(2) = Display net motor

(3) = Bale chamber and lifter display

(4) = Holding arms display

Possible status messages window 3 (bale chamber); see chapter “Status messages”.

8.11.1 Opening/closing the holding arms

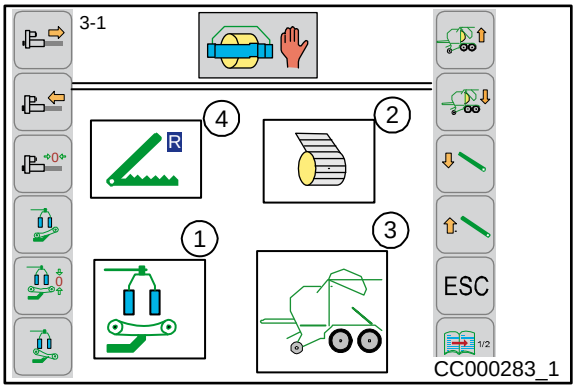


Fig. 115

- Softkey opens the holding arms as long as the softkey is pressed or until the opened end position is reached.
- Softkey closes the holding arms as long as the softkey is pressed or until the closed end position is reached.
- Softkey releases the holding arms.

Possible status messages window 4 (holding arms) see Section "Status messages".

- Pressing the **ESC** function button closes the open menu.
- Pressing and holding the **ESC** function button opens the home screen.

8.11.2 Switching on/off wrapping arm

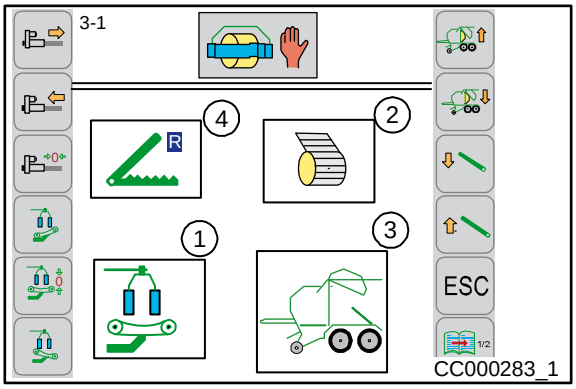
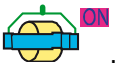


Fig. 116

- Pressing the softkey

will switch the wrapping arm on. When the wrapping arm is turning, the display switches to 

.
- Pressing the softkey

will switch the wrapping arm off.

8.11.3 Move the wrapping arm to zero position

- Press softkey

and hold it down until the wrapping arm has reached the zero position.

Move the swivel table; voir chapter “Swivel table” move manually.

Possible status messages window 1 (wrapping arms/swivel table); refer to chapter “Status messages”.

8.12 Menu 3-2 „Manual Operation Wrapping Arm" CV 210

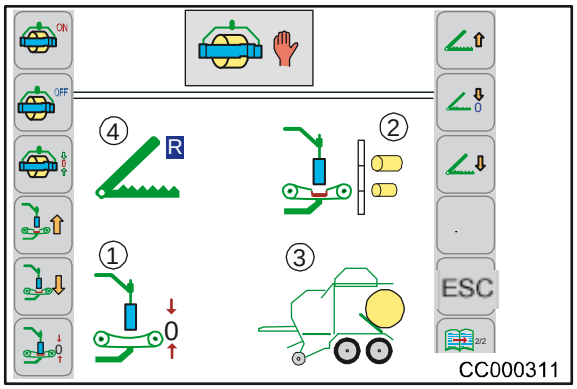


Fig. 117

Calling the Menu

Menu 3-1 "Manual Operation Baler" is called.

- Activate the 1/2 key to change to menu 3-2 "Manual Operation Wrapping Arm". 2/2

Displays in the Display

(1) = Wrapping arm display

(2) = Height wrapping arm display

(3) = Bale chamber and lifter display

(4) = Holding arms display

For Possible Status Messages Window 3 (Bale Chamber) See Chapter “Status Messages”.

8.12.1 Move the Height of the Wrapping Arms

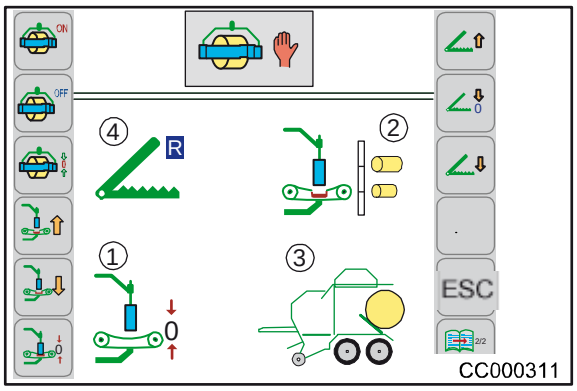
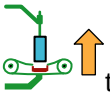
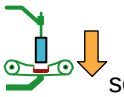
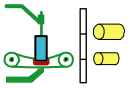
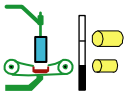


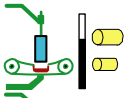
Fig. 118

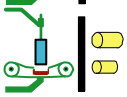
- Use softkey  to move the wrapping arms to the top as long as the softkey is activated or the desired position is reached
- Use the  softkey to move the wrapping arms downwards as long as the softkey is activated or the desired position has been reached
- Press softkey and hold it down until the wrapping arm has reached the zero position
- Pressing the function key **ESC** closes the called up menu

Possible Status Messages Window 2 (Height Wrapping Arm):

 = wrapping arm in parking position

 = wrapping arm in wrapping position to 150 cm bale size

 = wrapping arm in wrapping position to 175 cm bale size

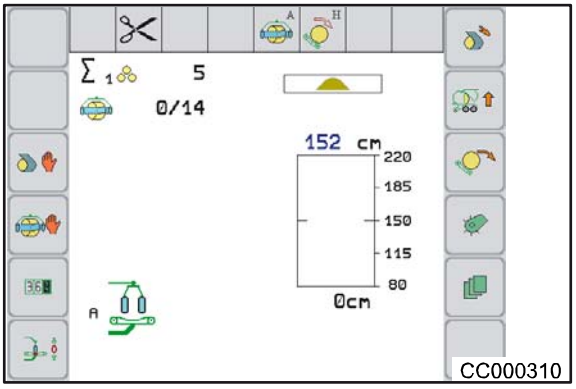
 = wrapping arm in pushing position in case of a bale size larger than 175 mm (only if the wrapping arm is deactivated)

8.12.2 Drive Height Wrapping Arm Into Parking Position

Note
Before starting road travel, move wrapping arm into parking position.

If the wrapping arm is:
- not in the parking position
- if there is no bale on the wrapping table or
- if the work sequence is complete,

the function button "Wrapping arm in parking position" is displayed on the home screen



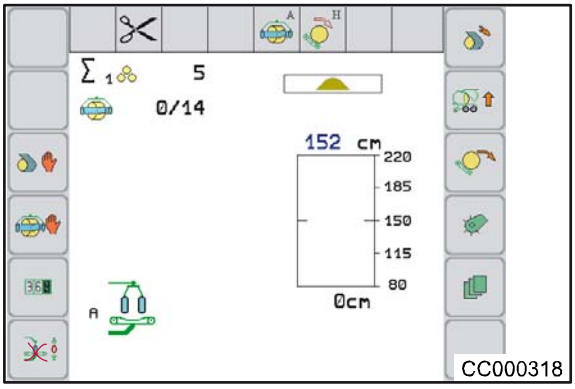
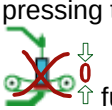


Fig. 119

- Pressing the function button moves the wrapping arm to the parking position.

Note
To insert new film rolls or if the filling of the bale chamber takes longer, the wrapping arm can be moved to the parking position when the bale has been put down by pressing the function button . Before ejecting the next bale, the wrapping arm automatically moves to the wrapping position.

Note

The wrapping arm moves into parking position by pressing the function key once. The process can be cancelled during moving by using  function key.

The symbol “Height Wrapper in Parking Position” appears in the status bar when the parking position is reached.

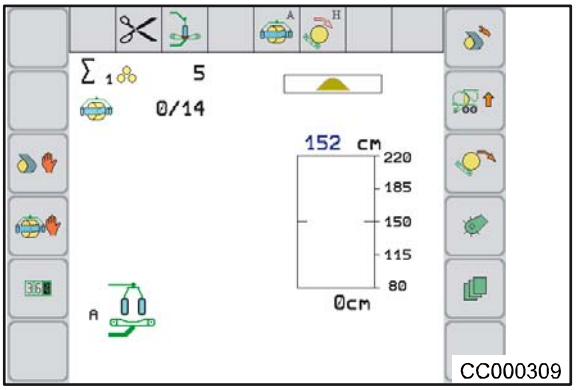
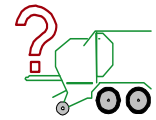


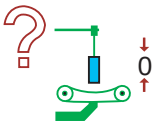
Fig. 120

8.12.3 Error messages Manual operation

= No defined state, no error message

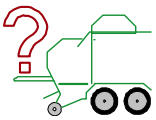
 = The bale chamber is not closed

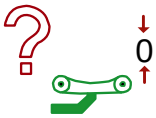
= The lifter is not down



= The wrapper is not in zero position

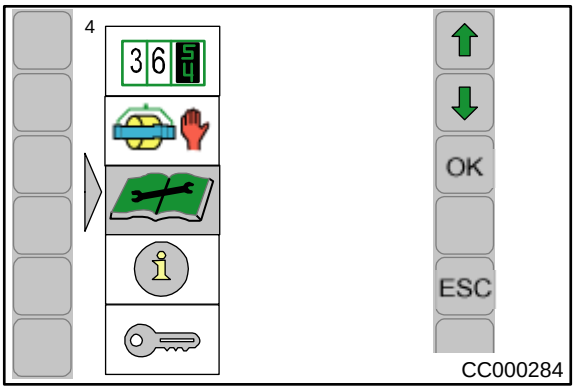
STOP = Quick stop is not active

 = The bale chamber is not opened



= The swivel table is not in position

8.13 Main menu 4 Service



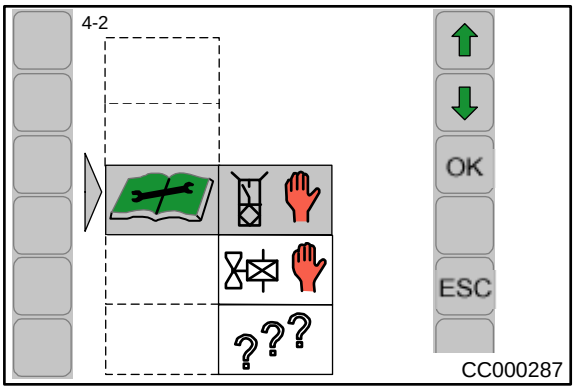


Fig. 121

Calling the main menu

- By pressing the function key in the basic screen you get into the menu level of the machine.
- You can select main menu 4 ( ) with function key or . The symbol is highlighted in grey.
- Press function key **OK**.

The display shows menu level 4 "Service".

Menu level 4 "Service" is divided into three menus:

= Menu 4-2 "Manual sensor test"

= Menu 4-4 "Manual actuator test"

= Menu 4-8 "Diagnostics"

8.13.1 Menu 4-2 Manual sensor test

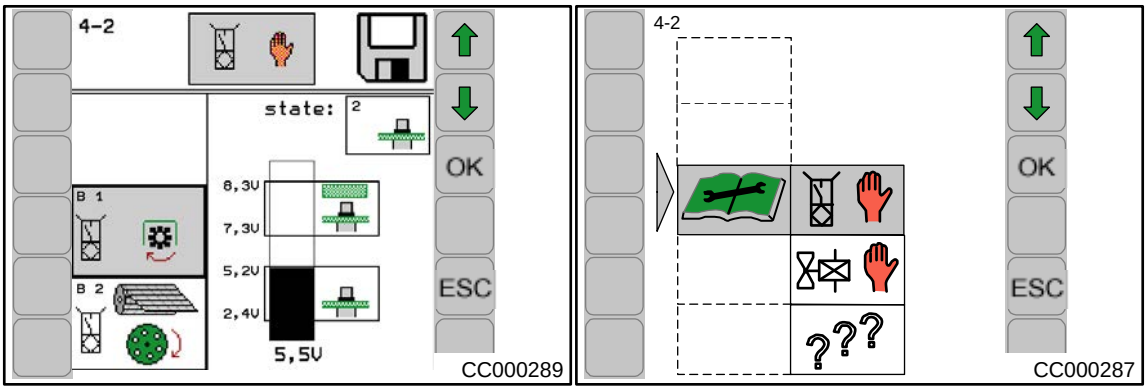


Fig. 122

In the manual sensor test, the sensors that are installed on the machine are checked for errors. In addition, the sensors can be correctly adjusted in the manual sensor test. There is no guarantee the machine is working correctly until after the sensors have been adjusted.

Caution!
The P.T.O. shaft must not be turning during the sensor test.

Calling the menu
Main menu 4 "Service" is called.

- You can select menu 4-2 by pressing the function key ↑ or ↓. The symbol is highlighted in grey.
- Press function key **OK**.

Selecting the sensor

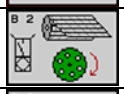
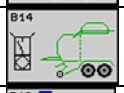
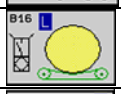
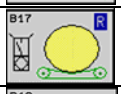
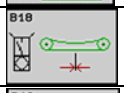
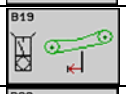
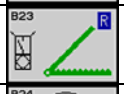
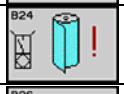
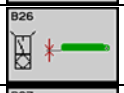
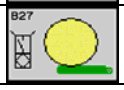
- Select the sensor by pressing the function key ↑ or ↓.

The selected sensor is displayed inversely and is tested.

Setting values:
The minimum and maximum setting values with the sensor alive (metal in front of the sensor) are shown in the upper part of the bar display. The current setting value (actual value) is displayed under the bar display.
The distance from the sensor to the metal must be adjusted so that in the alive state the bar is in the upper mark. Next check whether the bar is in non-alive state in the lower marked area.

Diagnostics – Namur sensors

Possible sensors (depending on how the machine is equipped)

No.	Sensor symbol	Description
B1		Net length
B2		Net runs
B5		Slip
B8		Cutter base position
B11		Bale chamber closed left
B12		Bale chamber closed right
B14		Bale chamber open
B16		Bale on swivel table left
B17		Bale on swivel table right
B18		Swivel table centre
B19		Swivel table forward
B20		Wrapping arm in zero position
B21		Position of wrapping arm
B22		Holding arm left
B23		Holding arm right
B24		Sheet tear control
B26		Lifter forward (Comprima CF155XC)
B27		Bale on lifter (Comprima CF155XC)

State:

1 Alive (iron)

2 Not alive (no iron)

3 Broken cable

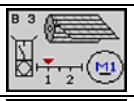
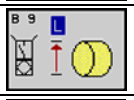
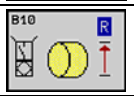
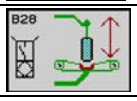
4 Short circuit

Diagnostics – analogue sensors

Setting values:

The bar must be inside the marked area of the bar display.

Possible analogue sensors (depending on how the machine is equipped)

No.	Sensor symbol	Description
B3		Position of net motor
B9		Bale diameter left (Comprima CV150/CV210 XC) Bale firmness left (Comprima CF155 XC)
B10		Bale diameter right (Comprima CV150/CV210 XC) Bale firmness right (Comprima CF155 XC)
B28		Height of wrapper arm (Comprima CV210 XC)

0 OK Alive (iron)

8 ERROR Not alive (no iron)

7 Broken cable / short circuit

B3 Adjusting position of net engine:
Retracting/extending the motor and saving positions

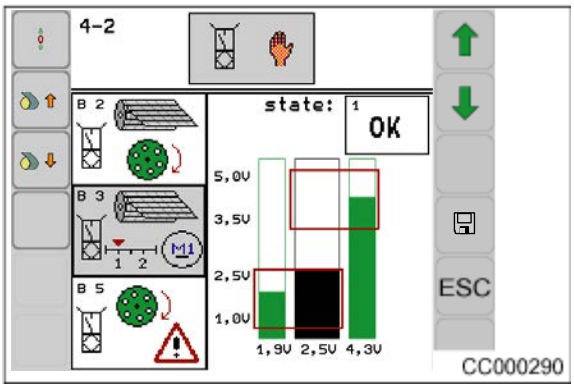


Fig. 123

Caution!
The feed and cut-off positions must be approached and stored.

Note
They can only be saved if the bar is in the lower or upper rectangle of the bar display.

Moving the engine out

- Softkey moves the engine out as long as the softkey is pressed or until the feed position is reached (see Menu 3-1 "Manual operation baler").

Storing a value:

- Press function button **OK** until the symbol appears briefly in the upper line.

Note
The value is stored when the right bar has accepted the value of the centre bar.

Moving Engine in

- Use the softkey to move the engine in as long as the softkey is activated or until the feed position is reached (see menu 3-1 “Manual Operation Baler”)

Saving Value:

- Press function key **OK** until the symbol appears briefly in the upper line

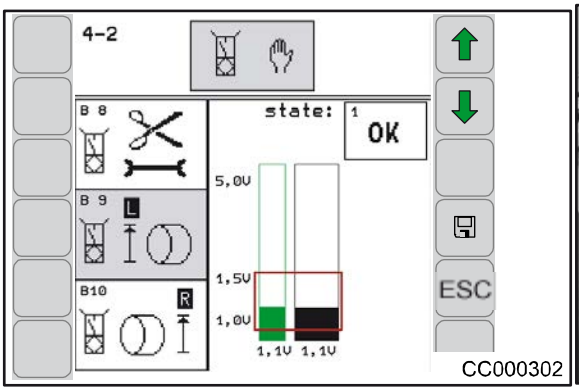
Note

The value is stored when the left bar has accepted the value of the centre bar.

Approaching Tying Position Engine

- Use softkey **DEF** to move the engine to the engine tying position as long as the softkey is activated or until the position is reached.
- Adjust the engine tying position mechanically

Adjusting Sensor B9/B10 Bale Firmness (Comprima CF155 XC):



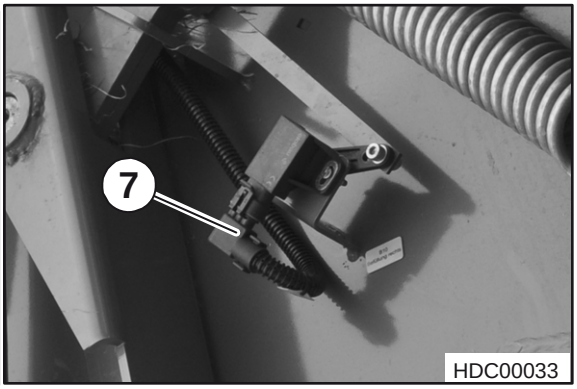


Fig. 124

Caution!
The bale chamber must be closed and empty.

If the bar (1) is not inside the rectangle (2) when the bale chamber is closed and emptied, the corresponding sensor (7) must be adjusted mechanically.
To do this:

- Loosen the sensor (7) and turn it in the oblong hole until the bar (1) is positioned inside the rectangle (2) of the bar display.

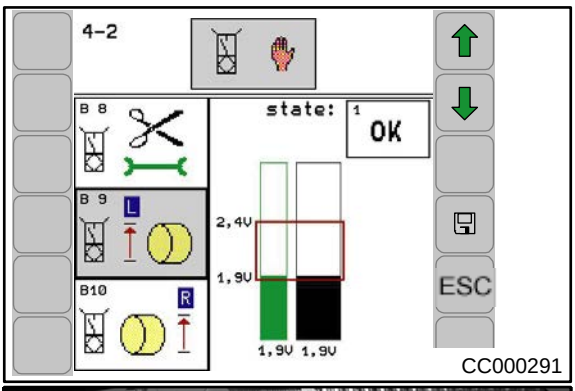
Note
An audio signal sounds if the bar (1) is inside the rectangle (2).

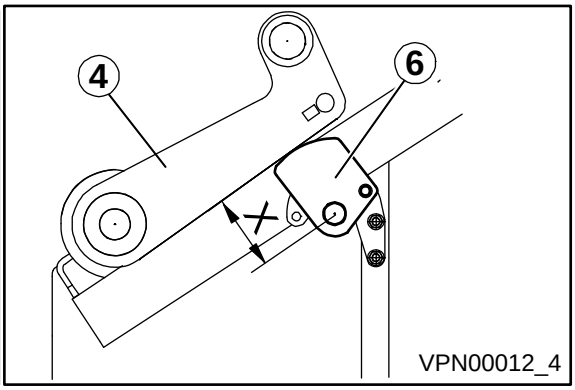
Saving Value:

- Press function key **OK** until the symbol appears briefly in the upper line .

Note
The value is saved when the left bar has accepted the value of the right bar.

Adjust sensor B9/B10 bale diameter (Comprima CV150XC):





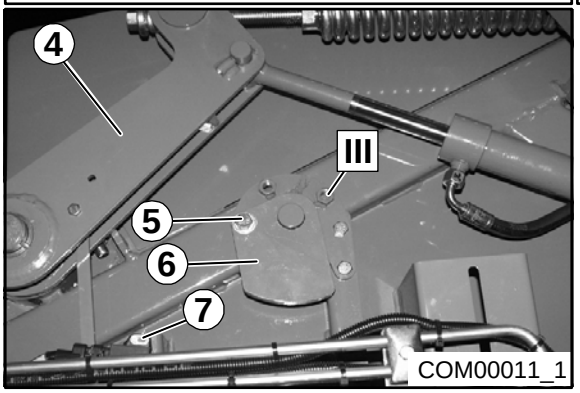


Fig. 125

Before you readjust or correct the setting of the sensor (7) “B9/B10 bale diameter,” make certain the stop (6) for the soft core setting is in Pos. III (soft inner bale core). A setting may only be made on the sensor (7) only in this position.

Soft core setting:

- Open the bale chamber.
- Remove the screw (5).
- Move stop (6) to Pos. III (soft inner bale core).
- Install and tighten the screw (5).
- Close the bale chamber.

Note

Make certain the feeder rake (4) is resting on the stop (6) (release floor conveyor, if necessary). The bale chamber must be closed and empty.

Dimension X must be 105 mm after the setting.

- Loosen the sensor (7) and turn it in the oblong hole until the bar (1) is positioned inside the rectangle (2) in the bar display.

Note

An audio signal sounds if the bar (1) is inside the rectangle (2).

Save value:

- Press the function key , until the symbol in the upper line appears briefly.

Note

The value is stored when the left bar has adopted the value of the right bar.

Setting B28 Height Wrapper:

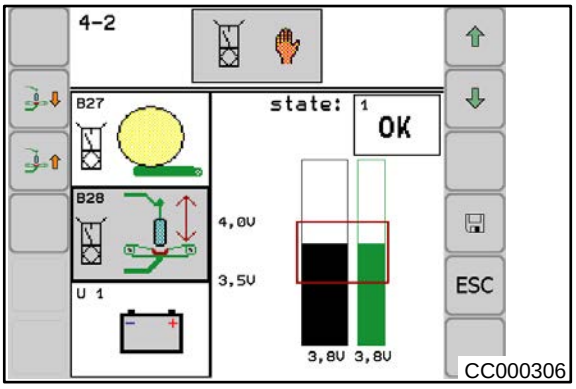
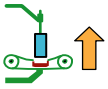


Fig. 126

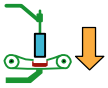
Caution!
The parking position of height wrapper must be approached and saved.

Note
They can only be saved if the bar is in the lowest or highest rectangle of the bar display.

Lifting Wrapper

- Use the softkey  to move the wrapper upwards as long as the softkey is activated

Lowering Wrapper

- Use the softkey  to move the wrapper downwards as long as the softkey is activated

Saving Value (When Wrapper is in Parking Position):

- Press function key **OK** until the symbol appears briefly in the upper line

Note
The value is saved when the right bar has adopted the value of the centre bar.

Diagnostics – power supply voltage

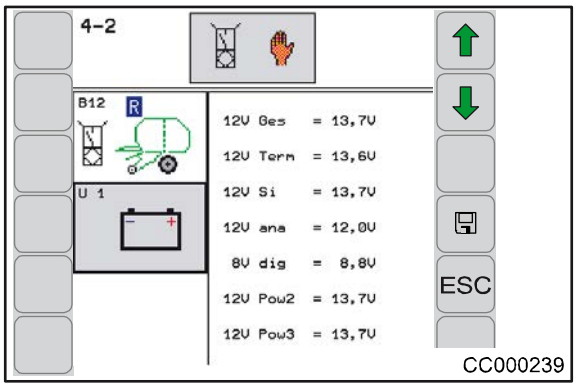
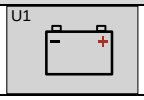


Fig. 127

No.	Sensor icon	Description
B1		power supply voltage

Nominal voltages:

12V Ges:	12 - 14,5 V
12V Ter:	12 - 14,5 V
SS_5V:	4,5 - 5,5 V
8V ana:	8,5 - 9,1 V
8V dig:	8,5 - 9,1 V
12V P2:	12 - 14,5 V

- Pressing the function key **ESC** closes the called up menu

The display shows menu level 4 "Service".

- Pressing the function key **ESC** and holding it down brings up the basic screen

8.13.2 Actuator test

WARNING!

The functions are directly executed by energizing the actuators. As a result, machine parts may start to move unexpectedly, persons may be captured and seriously hurt.

- Switch off PTO shaft.
- Deactivate tractor hydraulics.
- Only persons familiar with the machine are permitted to perform the actuator test.
- The person performing the test must know the machine parts being actuated by controlling the actuators. If necessary, secure actuated machine components from unintentional lowering.
- Only perform the sensor test from a safe position outside the moving machine parts.
- Make sure that there is no one in the danger zone.

8.13.3 Menu 4-4 Manual actuator test

The actuator test is used to test the actuators installed on the machine. An actuator can only be tested if power is flowing through it. In the manual actuator test the actuator must therefore be controlled manually for a short time to be able to determine if there are any errors in the actuator system.

CAUTION! - Unexpected actions on the machine.

The P.T.O. shaft must not be turning during the actuator test. The tractor hydraulics must be deactivated.

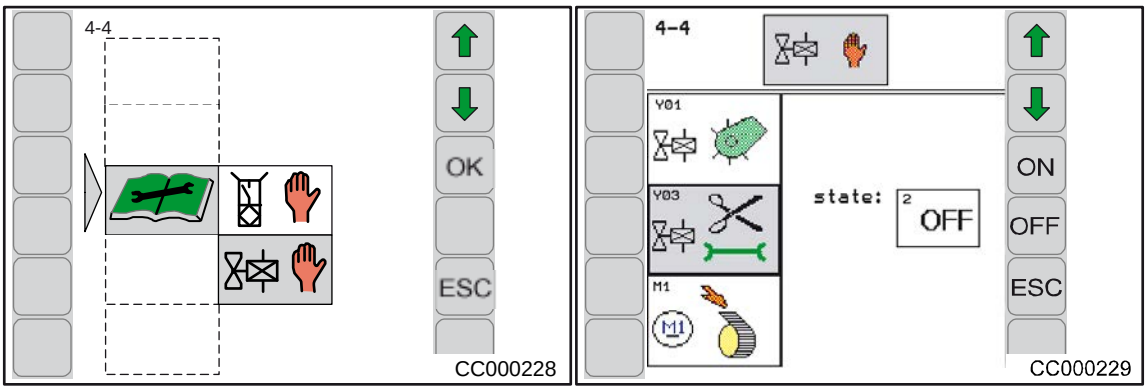


Fig. 128

Calling the menu

Main menu 4 "Service" is called.

- Pressing the function key ⬆ or ⬇ to select Menu 4-4 . The symbol is highlighted in grey.
- Pressing the function key **OK**

The display shows menu level 4-4 „Manual actuator test"

Selecting the actuator

- Pressing the function key ⬆ or ⬇ to select Actuor.

The symbol is highlighted in grey.

M01 Net setting motor

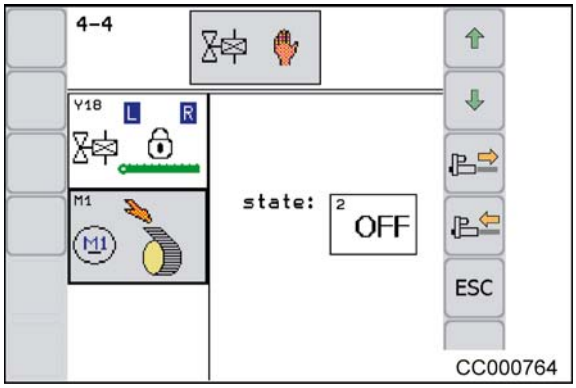
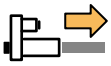
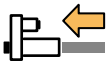


Fig. 129

- Softkey  moves the engine out. The function is contact only.
- Softkey  moves the engine in. The function is contact only.

Y06 Wrapping arm control valve

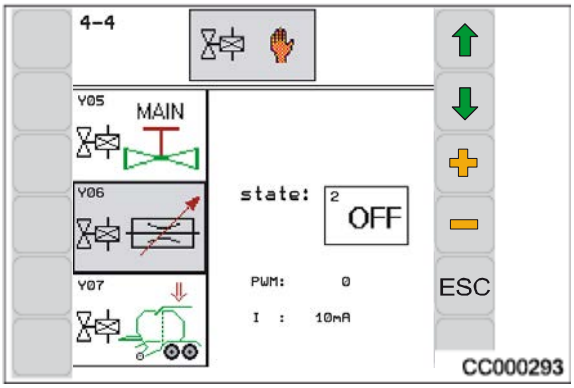


Fig. 130

- Press the function button to activate the control valve so that the flow rate increases.
- Press the function button to activate the control valve so that the flow rate reduces.

The current electrical current is shown under the status display (if measured).

State:

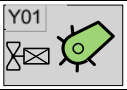
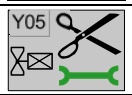
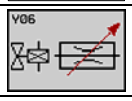
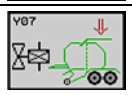
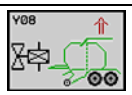
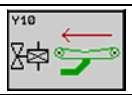
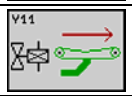
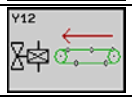
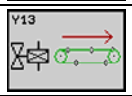
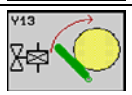
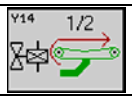
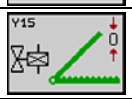
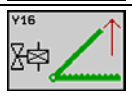
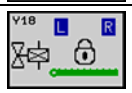
① ON Actuator on

② OFF Actuator off

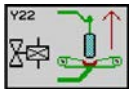
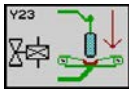
③ General actuator error

④ FUSE No power supply; fuse is probably defective

Possible digital actuators (depending on how the machine is equipped)

No.	Sensor symbol	Description
Y01		Pick-up valve
Y03		Ground monitoring valve
Y04		Function valve
Y05		Valve cutter base position
Y06		Wrapping arm control valve
Y07		Close the bale chamber
Y08		Open bale chamber
Y10		Swivel table forward
Y11		Swivel table back
Y12		Reversing the wrapping table (Comprima CV XC)
		Lifter forward (Comprima CF XC)
Y13		Wrapping table back (Comprima CV XC)
		Lifter back (Comprima CF XC)
Y14		Half speed
Y15		Release holding arms
Y16		Open holding arms
Y17		Close holding arms
Y18		Disable holding arms

Additional digital actuators for Comprima CV210 XC

No.	Symbol	Description
Y01		Lift valve wrapper
Y03		Lower valve wrapper

Possible motors (depending on machine configuration)

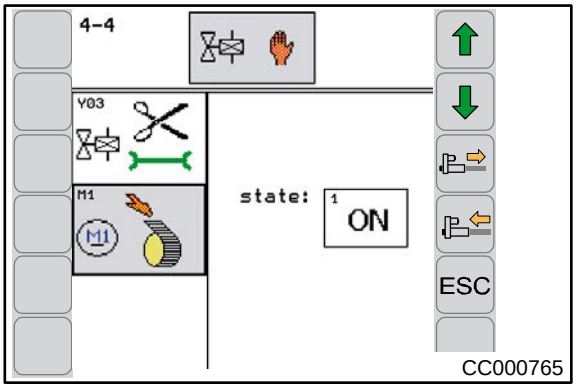
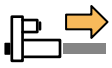
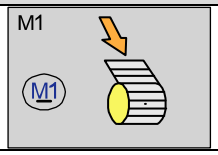


Fig. 131

- Press the  function button to extend the motor, inching operation only.
- Press the function button to retract the motor, inching operation only.

No.	Symbol	Description
M1		Net wrapping setting motor

State:

① ON Actuator on

② OFF Actuator off

③ General actuator error

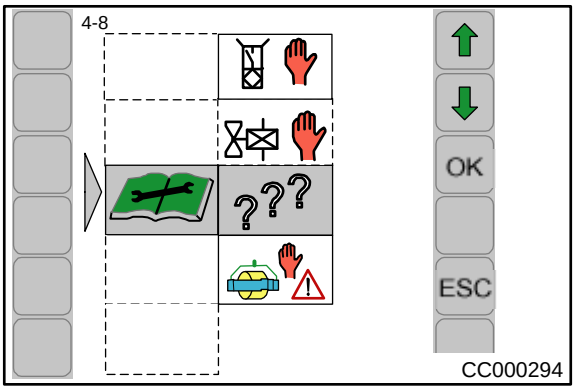
④ FUSE No power supply; fuse is probably defective

- Pressing the function key **ESC** closes the called up menu

The display shows menu level 4 "Service".

- Pressing the function key **ESC** and holding it down brings up the basic screen

8.13.4 Menu 4-8 Diagnostics



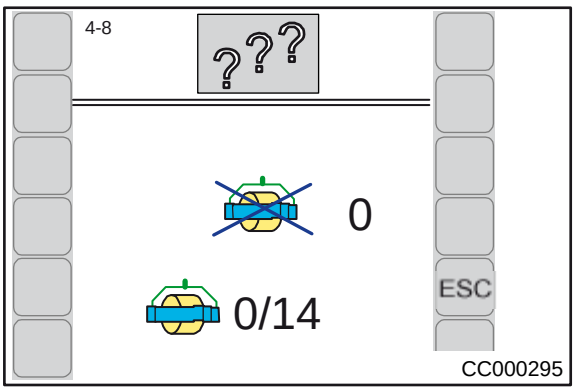


Fig. 132

Displaying the menu

Call the „Service“main menu 4.

- Press function key ↑ or ↓ to select menu 4-8 (???), the icon is shown in reverse colours.
- Press function key **OK**

The display shows menu 4-8 “Diagnostics”.

- Pressing the function key **ESC** closes the called up menu

The display shows menu level 4 "Service".

- Pressing the function key **ESC** and holding it down brings up the basic screen

8.13.5 Menu 4-9 Manual operation without confirmation prompt

Danger! – Unexpected actions on the machine.
Effect: Danger to life or serious injuries, machine damages.

- The person performing must know, which machine parts are activated via manual operation without confirmation prompt. If necessary, the set machine parts have to be secured against inadvertent lowering
- There must be no persons, animals and objects in the danger zone.

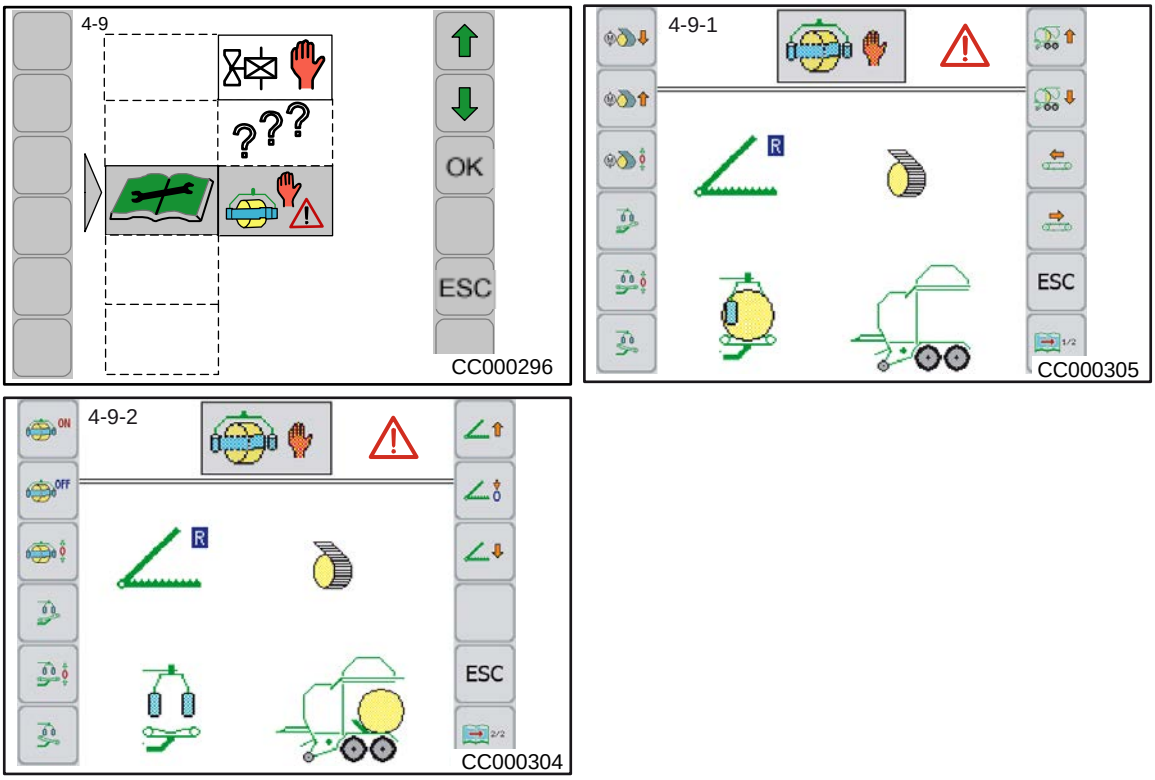


Fig. 133

Displaying the menu
Call the „Service“ main menu 4.

- Select menu 4-9 ( ) by pressing function key ⬆ or ⬇, the icon is shown in reverse colours.
- Press function key **OK**

The display shows the menu 4-9 “Manual operation without confirmation prompt”.

Note
All menu items listed in main menu 3 „Manual operation“ can be called.

Possible status messages for manual operation without confirmation prompt, see chapter “Status messages”.

Caution!
When menus 4-9-1 and 4-9-2 are activated, they are executed immediately without program-controlled confirmation prompt.

Note
If manual operation without confirmation prompt is executed despite display of an error message in the display, damages to the machine may arise.

Possible error messages manual operation without confirmation prompt:

= No defined state, no error message

= The bale chamber is not closed

= The lever is not down

= The wrapper is not in zero position

STOP = Quick stop is not active

= The bale chamber is not opened

= The swivel table is not in position

- You can use the function key **ESC** to close the menu that is displayed.

The display shows the menu level 4 “Service”.

- Pressing the function key **ESC** and holding it down brings up the basic screen.

- Pressing the function key **ESC** closes the called up menu

The display shows menu level 4 "Service".

- Pressing the function key **ESC** and holding it down brings up the basic screen

8.14 Main Menu 5 Information

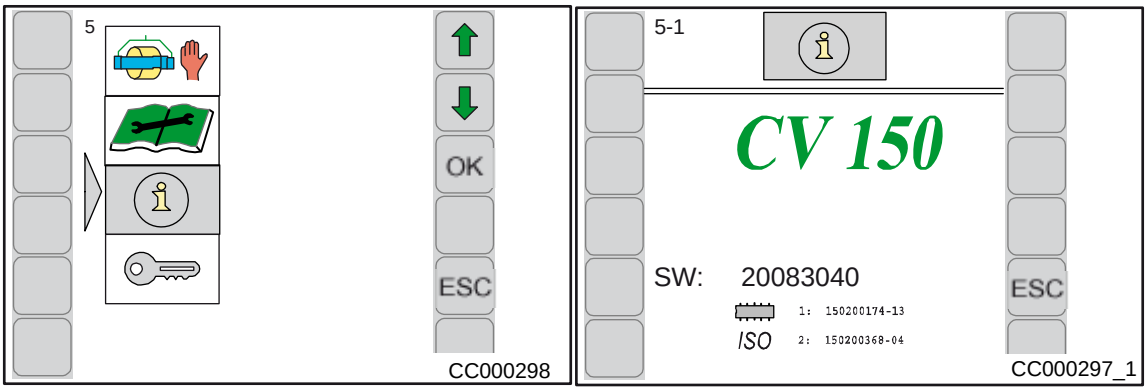


Fig. 134

Calling the Main Menu

- By pressing function key from the basic screen you get into the menu level of the machine
- Select main menu 5 ( ) by pressing function key or , the symbol is shown in reverse colours
- Press **OK** function key

The display shows menu 5 “Information".

Complete software version of the machine

SW = Complete software version of the machine

= Software of the job computer

ISO = ISO software version of the job computer

- Pressing the function key **ESC** closes the called up menu

The display shows menu level 5 "Info".

- Pressing the function key **ESC** and holding it down brings up the basic screen

8.15 Main Menu 6 Technician

Calling the Main Menu

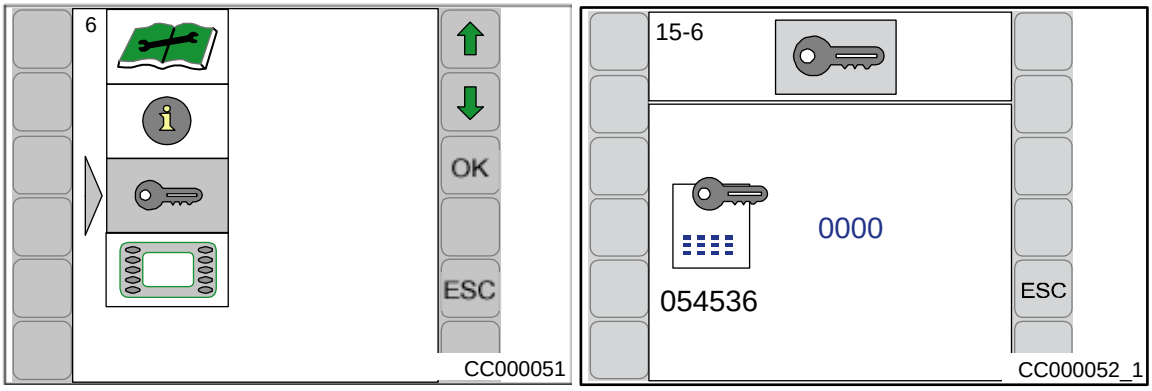


Fig. 135

- By pressing function key in the basic screen you get into the menu level
- Select main menu 6 by pressing function key or . The symbol is highlighted in grey.
- Press function key **OK**

Main menu 6 "Technician" is password-protected.

The display shows the password query.

8.16 Main Menu 7 ISOBUS

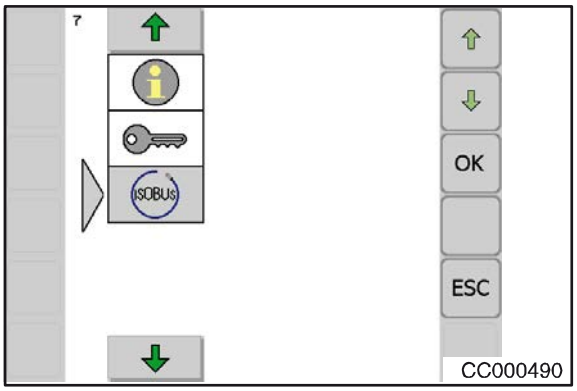


Fig. 136

Calling the Main Menu

- By pressing the function key from the basic screen you get into the menu level of the machine
- Select main menu 7 ( ) by pressing function key or , the symbol is highlighted in colours
- Press function key **OK**

The display shows menu level 7 “ISOBUS”.

8.16.1 Menu 7-1 Virtual Terminal (VT)

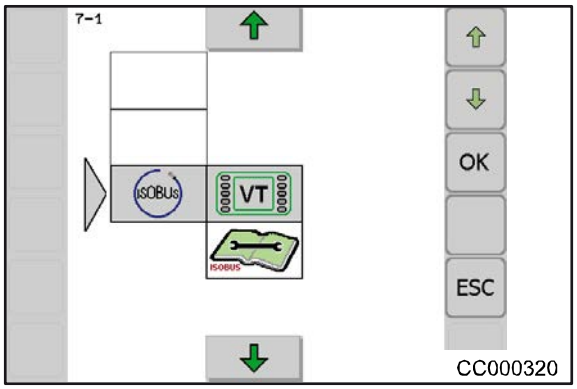
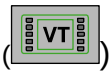


Fig. 137

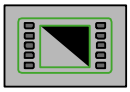
Calling main menu

Main menu 7 “ISOBUS” is called.

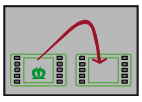
- Select menu 7-1 () by pressing function key ⬆ or ⬇, the symbol is highlighted in colours
- Press function key **OK**

The display shows menu level 7-1 “Virtual Terminal (VT)”.

The menu “Virtual Terminal (VT)” is divided into the following menus:

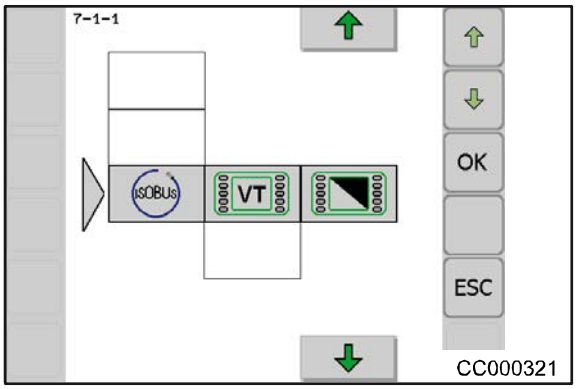
 = Menu 1-7-1 „Switching Day-Night Lighting Display”

= Menu 1-7-3 “Softkeys ISO Terminal” (only appears on terminals with less than 10 keys)

 = Menu 1-7-4 “Switching to a Further Terminal”

- Pressing the function key **ESC** closes the called up menu
- Pressing the function key **ESC** and holding it down brings up the basic screen

8.16.2 Menu 7-1-1 Select day/night display lighting



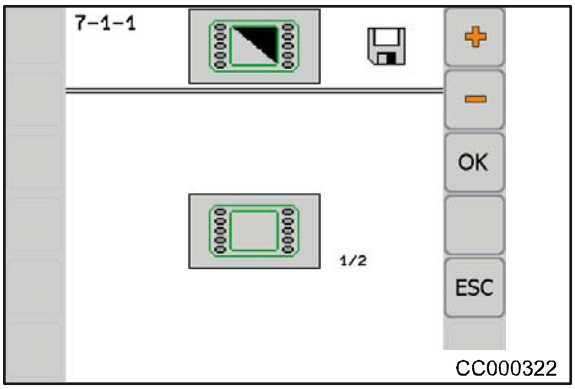
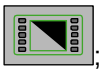


Fig. 138

The "Select day/night display lighting" menu can be used to adjust the brightness of the display.

Menu 7-1 "Virtual terminal (VT)" is opened.

- Press the ↑ or ↓ function button to select menu 7-1-1  ; the icon is highlighted in colour
- Press the **OK** function button

The display shows the screen 1/2 "Day lighting" in menu 7-1-1 "Select day/night display lighting".

- Press the button to switch to the screen

The display shows the screen 2/2 "Night lighting" in menu 7-1-1 "Select day/night display lighting".

8.16.3 Menu 7-1-3 „Softkeys ISO Terminal“

Note
This menu only appears on ISO terminals with less than 10 keys

In the menu, the basic screen (for ISO terminal with less than 10 keys) is set to 5 or 10 softkeys. During the change-over to 10 softkey buttons, additional softkeys will be virtually included and can be reached by scrolling.

Note
An additional ISO joystick is recommended for ISO terminals with less than 10 keys so that the hitched machine can be operated more comfortably. For the assignment of the joystick, please refer to chapter “Example of Joystick Assignment”.

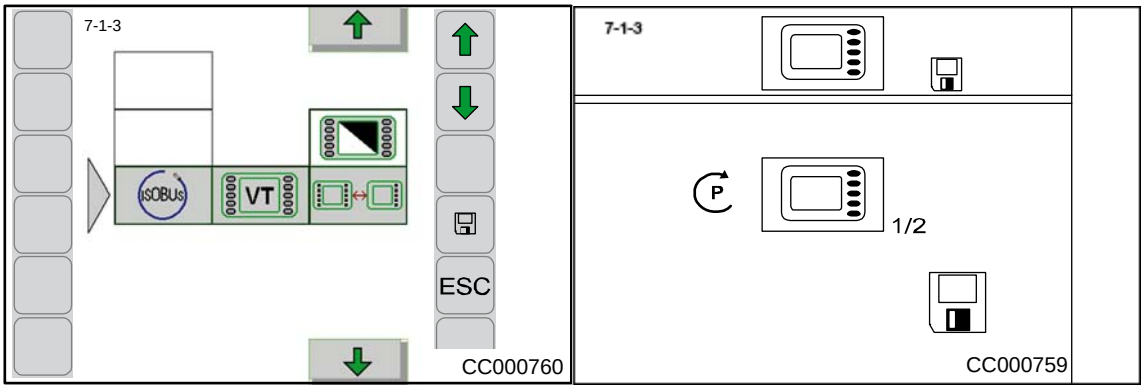


Fig. 139

Menu 7-1 „Virtual Terminal (VT)“ is called.

- Select menu 7-1-3 ⇔ by pressing function key ↑ or ↓.
- Press function key **OK**.

The display shows menu 7-1-3 “Softkeys ISO Terminal”.

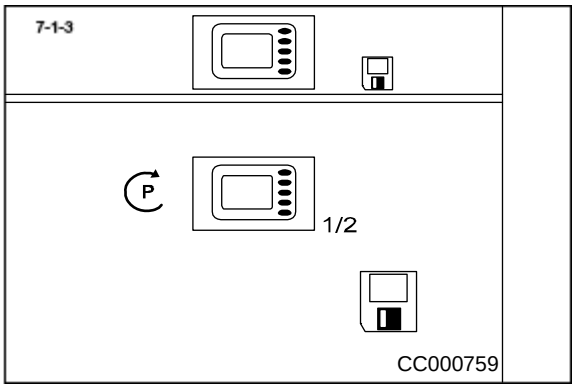
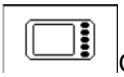
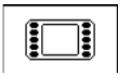


Fig. 140

The current status is displayed as a symbol:

 Change of the basic screen to 5 softkey buttons

 Change of the basic screen to 10 softkey buttons

The symbol in the upper line indicates that the displayed status is saved.

Changing and saving status

- Set the desired status with key ↑ or ↓, the symbol in the upper line goes out
- Press key **OK**, the set status is saved, the symbol in the upper line appears
- Use the **ESC** key to close the menu currently displayed
- Pressing function key **ESC** and holding it down brings up the basic screen

8.16.4 Menu 7-1-4 Switch to different terminal

Note

- Menu 7-1-4 only appears if several ISOBUS terminals are connected.
- Menu 7-1-4 can be used to switch to the next connected terminal (depending on how many terminals are connected).
- The first time you switch, the configuration of the machine is loaded to the next terminal. Loading may take a few minutes. The configuration is saved in the memory of the next terminal.

Note

The next time a call is made, the machine is no longer available in the previous terminal.

Note

When restarting, the system first attempts to start the last terminal used. If the last terminal used is no longer available, the restart is delayed as the system looks for a new terminal and loads the specific menus to that terminal. Loading may take a few minutes.

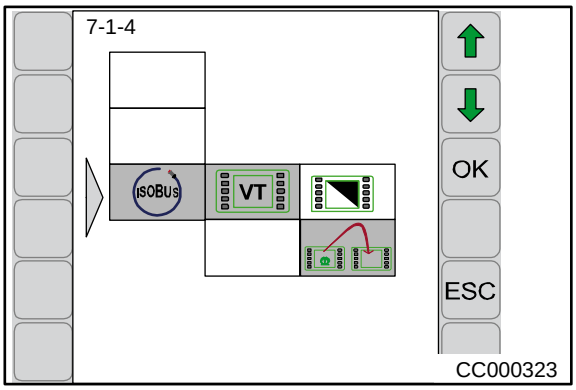


Fig. 141

Opening the menu

Main menu 7-1 "Virtual terminal (VT)" is opened.

- Press the ↑ or ↓ function button to select menu 7-1-4 ( ); the icon is highlighted in colour.
- Press the **OK** function button

The displays shows menu level 7-1-4 "Switch to different terminal".

Press the function key **OK** or ( ) on the touch screen to switch to a different connected terminal.

- Pressing the **ESC** function button closes the open menu.
- Pressing and holding the **ESC** function button opens the home screen.

8.17 Menu 7-4 ISOBUS Diagnostics

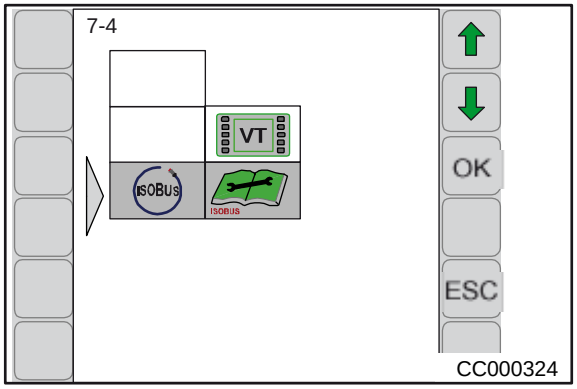


Fig. 142

Calling the Menu

Main menu 7 “ISOBUS” is called.

- Select menu 7-4 by pressing function key ⬆ or ⬇, the symbol is shown in reverse colours
- Press function key **OK**

The display shows menu 7-4 “ISOBUS diagnostics”.

8.17.1 Menu 7-4-2 Diagnostics Auxiliary Functions (AUX)

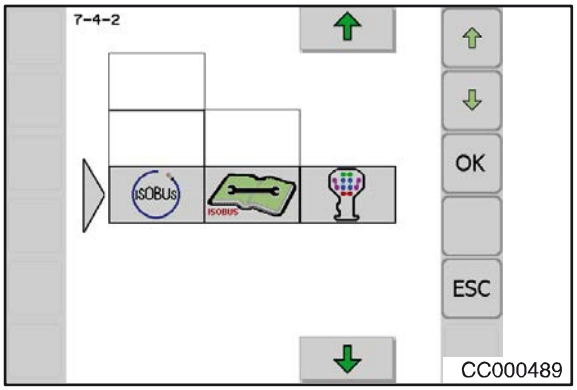


Fig. 143

Calling the Menu

Menu 7-4 “ISOBUS diagnostics” is called.

The menu 7-4-2 “Diagnostics Auxiliary Function” shows you with which key on the joystick the auxiliary function is carried out.

- Select menu 7-4-2 by pressing function key ↑ or ↓, the symbol is highlighted in colours
- Press function key **OK**

The display shows menu 7-4-2 “Diagnostics Auxiliary Functions”.

When activating a function on the joystick, only the assigned symbol will appear in the display. The function itself is not performed.

- Pressing the function key **ESC** closes the called up menu
- Pressing the function key **ESC** and holding it down brings up the basic screen

8.18 Messages

8.18.1 Query message for bale chamber

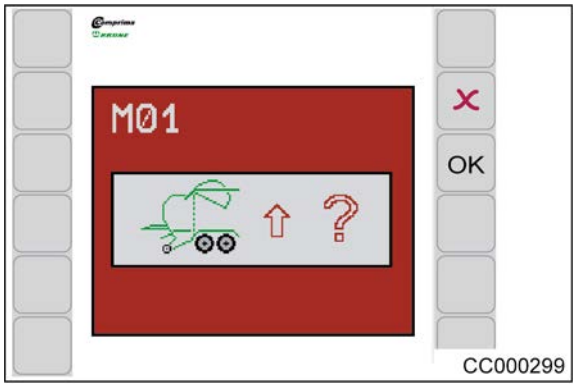


Fig. 144

The query message „M1“appears, if the transfer from the bale chamber to the swivel table has been started but the tying process is not yet completed.

- The query message disappears by pressing function key . The transfer is cancelled and you can proceed.
- Press function key
- The bale chamber is opened and the transfer to the swivel table is adjusted

8.18.2 Query message manual operation

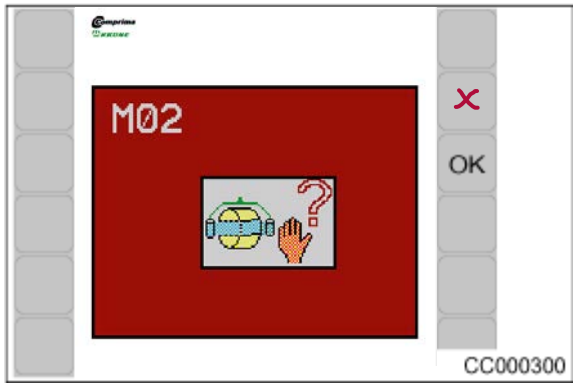


Fig. 145

The query message „M2“ appears, if the manual operation with confirmation prompt shall be started or if the wrapping process is not yet completed.

- The query message disappears by pressing function key . Manual operation will not be started and you can proceed.
- Press function key
- The manual operation is started

8.18.3 Prompt message Repeat wrapping

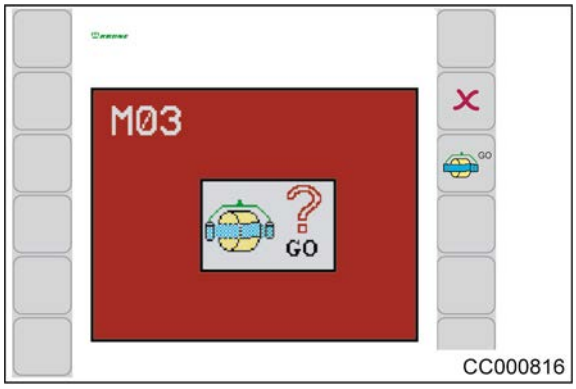


Fig. 146

Prompt message "M3" appears if the function button

is pressed again after wrapping to start a second wrapping process.

- Pressing the function button clears the prompt message. The wrapping process is not stored.
- Press the function button

to start the second wrapping process. The bale is wrapped again.

Caution!
The film must be cut off before the second wrapping!

8.18.4 Alarm messages

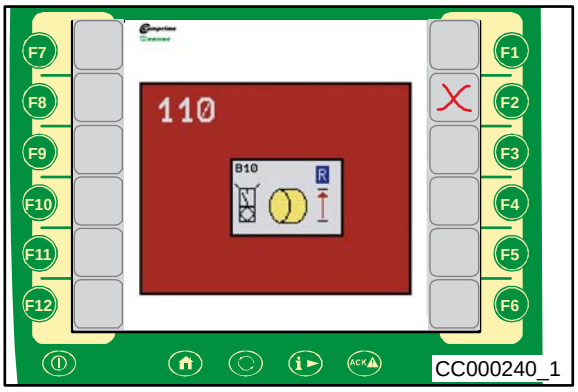


Fig. 147

Alarm message

If a fault occurs on the machine, an alarm message appears in the display and an acoustic signal sounds at the same time (continuous horn). Descriptions of the faults, their possible causes and how to resolve them are described in the "Alarm messages" chapter.

Note

All functions in the menu that is covered over are still active. The softkeys that are covered by the alarm message are disabled.

To reset the alarm:

- Briefly press the X function button; the alarm is reset and the acoustic signal is stopped.

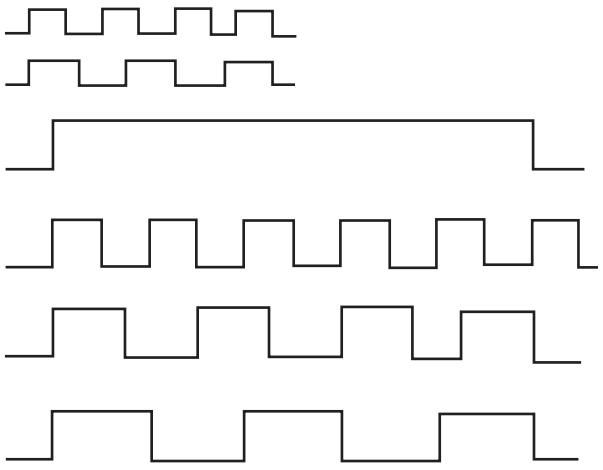
If the fault occurs again, the alarm message will appear again.

To delete an alarm:

- Hold down the B button for the X softkey for 5 seconds; the acoustic signal stops immediately and the alarm is deleted.

If the fault occurs again, no alarm message will appear. The alarm message does not appear when the fault occurs until after the control unit is turned off and back on.

8.18.5 Acoustic warnings



Wrapping is triggered

Filling reached, pre-signal reached, wrapping complete, bale chamber closed

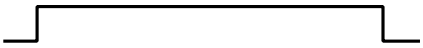
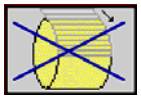
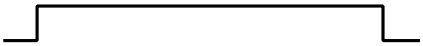
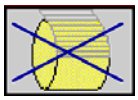
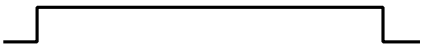
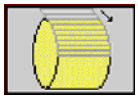
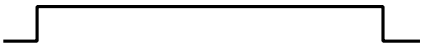
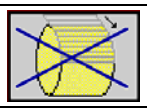
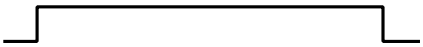
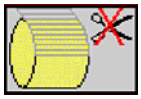
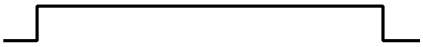
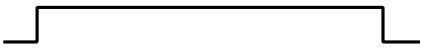
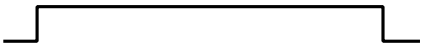
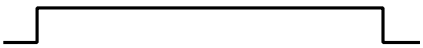
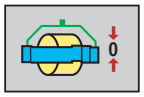
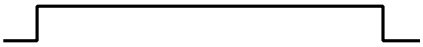
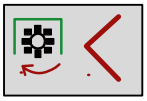
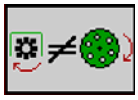
Continuous tone

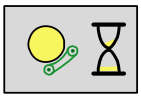
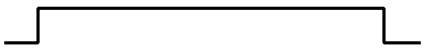
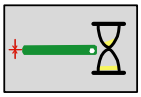
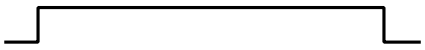
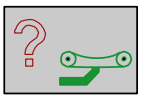
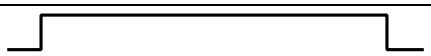
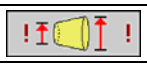
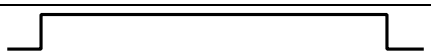
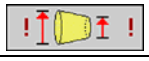
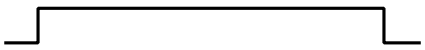
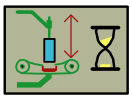
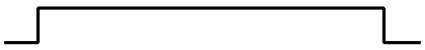
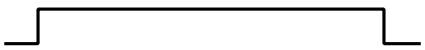
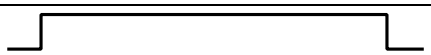
Rapid interval

Medium interval

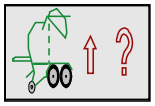
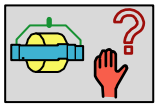
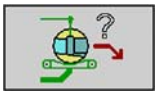
Long interval

8.18.6 Note and messages

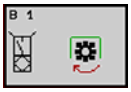
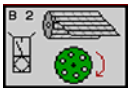
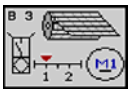
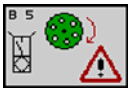
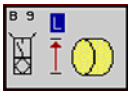
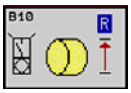
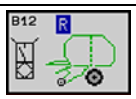
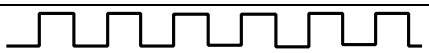
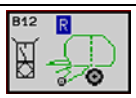
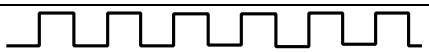
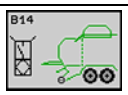
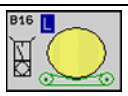
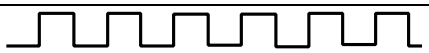
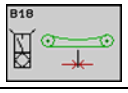
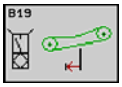
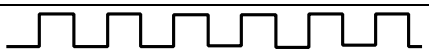
No.	Symbol	Acoustic signal	Description
2			The maximum filling has been reached
5			Net has not been trailed
6			Net stopped
7			Net runs
8			Error while inserting the net
9			No net separation takes place
10			Bale chamber not closed
11			Quick stop valve active
12			Torn sheet
13			Wrapping arm not in zero position
14			Blade down
15			Speed is too low
16			Slip
17			Time problem: bale chamber open not reached

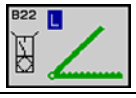
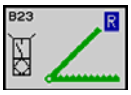
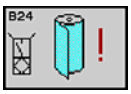
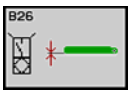
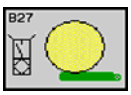
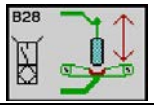
No.	Symbol	Acoustic signal	Description
18			One-sided sheet tear
19			Time problem: bale on swivel table is not reached
20			Time problem: lifter forward is not reached
21			Sensors swivel table adjusted wrong; if necessary, stop transfer or stowage
22			Net length sensor adjusted incorrectly
24			Filling problem – left too small
25			Filling problem – right too small
30			Time problem: Parking position of wrapper is not reached (Comprima CV210 XC)
32			Blade up
33			Blade down

8.18.7 Prompts

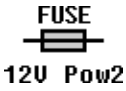
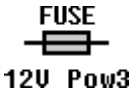
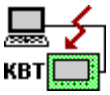
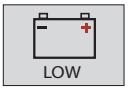
No.	Figure	Description
M01		– Should the transfer really be started even though the tying system has **not** been actuated?
M02		– Should manual operation really be selected even though automatic functions (transfer, wrapping, putting down) are running? – Automatic functions will stop as soon as manual operation is selected
M03		– Should the bale really be wrapped again? **Caution!** **The film must be cut off before the second wrapping!**
M04		– Should the bale really be put down even though it has not been completely wrapped?

8.18.8 Physical messages

No.	Symbol	Acoustic Signal	Description
101			Sensor “net length” defective
102			Sensor “net runs” defective/axial play of the net brake is too large (for the setting of the play, refer to chapter “Maintenance”)
103			Sensor “position of net engine” defective
105			Sensor “slip” defective
108			Sensor “ground monitoring control” defective
109			Sensor “bale diameter left” defective
110			Sensor “bale diamter right” defective
111			Sensor “bale chamber closed left” defective
112			Sensor “bale chamber closed right” defective
114			Sensor “bale chamber open” defective
116			Sensor “bale on swivel table left” defective
117			Sensor “bale on swivel table right” defective
118			Sensor “swivel table centre” defective
119			Sensor “swivel table front” defective
120			Sensor “position wrapping arm in zero position” defective
121			Sensor “position wrapping arm” defective

No.	Symbol	Acoustic Signal	Description
122			Sensor “holding arm left” defective
123			Sensor “holding arm right” defective
124			Sensor “sheet tear monitoring” defective
126			Sensor “lifter bottom” defective (Comprima CF 155 XC)
127			Sensor “bale on lifter” defective (Comprima CF 155 XC)
128			Sensor “wrapping arm height” defective (Comprima CV 210 XC)

8.18.9 General Messages

No.	Icon	Acoustic signal	Description
A01			Fuse 2 defective (job computer)
A02			Fuse 3 defective (self-repairing)
A03			No connection to control unit
A04			EEPROM faulty
A14			Power supply too low
A15			Power supply too high
A16			Access to protected storage cell 0
A17			Access to protected storage cells 0-

9 ISOBUS operation

General aspects

The ISOBUS system is an internationally standardized communication system for agricultural machines and systems. The designation of the related series of standards is: ISO 11783. The agricultural ISOBUS system makes an information and data exchange between tractor and device of different manufacturers possible. To this end, both, the necessary plug connections and the signals are standardized which are necessary for the communication and command transmission. The system also enables the operation of machines with control units (terminal) which are already existent on the tractor or have been attached in the tractor cabin. The relevant details can be found in the technical documentation of the control unit or on the device itself.
Those KRONE machines which are ISOBUS equipped are adapted to this system.

Note

The KRONE ISOBUS systems pass the ISOBUS COMPATIBILITY TEST (DLG/VDMA) on a regular basis. The operation of this machine requires at least implementation level 3 of the ISOBUS system.

DANGER!

When using terminals and other control units which have not been delivered by KRONE mind that the user:

- has to take the responsibility for the use of KRONE machines when using the machine on control units (terminal / other control elements) which have not been delivered by KRONE
- must check the machine before operation on all machine functions, if they are performed as described in the enclosed operating instructions
- as possible, should only couple those systems to each other which have passed a DLG/VDMA test (so called ISOBUS COMPATIBILITY TEST) before
- has to follow the operating and safety instructions of the supplier of the ISOBUS control unit (e.g. terminal)
- must guarantee that the control elements and machine control systems fit together according to the IL (IL= Implementation Level; describes the compatibility status of the different software versions) (requirement: IL same or higher)

9.1 Mounting ISOBUS Terminal

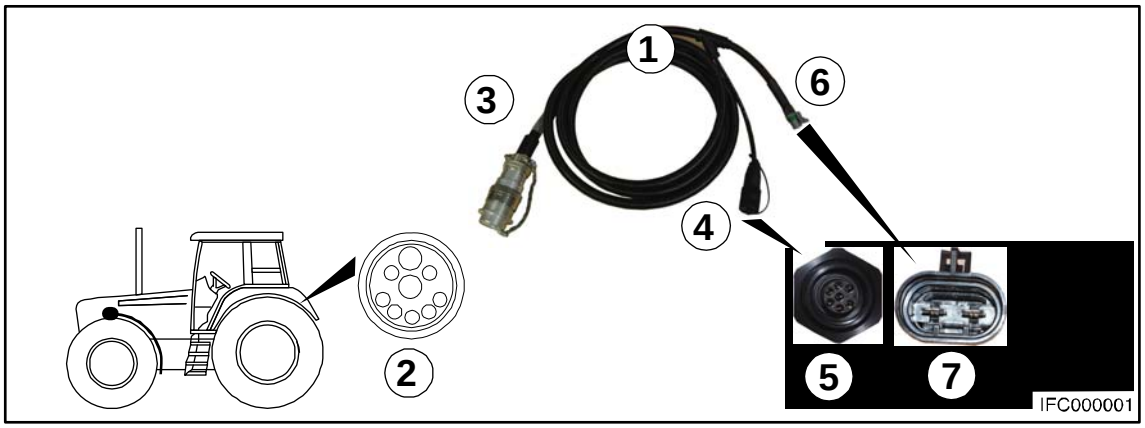


Fig. 148

CAUTION!
Failure of control unit.
When installing, make certain that the connection cables are not tight when cornering and that they do not touch the tractor wheels or any other parts of tractor or machine.

9.1.1 Connection Terminal to Tractor

Note
For further details on the attachment, consult the operating instructions of the ISOBUS terminal manufacturer.

9.1.2 Connection Tractor to Machine

- Connect ISO-plug (3) (9-pole) of cable set (1) with outer ISO-socket (2) (9-pole) on tractor side
- Connect plug (4) (7-pole) of cable set (1) with socket (5) (7-pole) of the machine
- Connect plug (6) (2-pole) of cable set (1) with socket (7) (2-pole) of the machine

9.2 Differing functions to KRONE ISOBUS terminal CCI

Via the accessory unit, the ISOBUS control unit will provide information and control functions to the display of the ISOBUS terminal. Operation with an ISOBUS terminal is analogue to the KRONE ISOBUS terminal CCI. Prior to start-up, refer to the operating instructions for the method of operation of the KRONE ISOBUS terminal CCI.
A fundamental difference to the KRONE ISOBUS terminal CCI is the arrangement of the softkeys, which are determined by the selected ISOBUS terminal.
Only the functions that differ from the KRONE ISOBUS terminal CCI are described in the following.

Note

The values for “Bale size (Comprima CV150)” and “Bale density (Comprima CF155)” which are set by the scroll wheel in the basic screen on the KRONE ISOBUS terminal CCI, are set on the ISO terminal with the selection key predetermined by the ISO terminal (refer to the operating instructions of the ISO terminal manufacturer).

Note

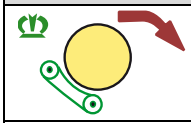
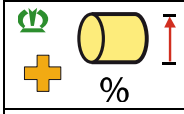
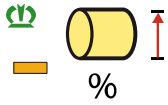
Menu item 1-4 "Contrast" of the KRONE control cannot be called up on the ISOBUS terminal. A setting is performed directly via the ISOBUS terminal (if applicable) (refer to operating instructions of the ISOBUS terminal manufacturer).
If necessary, acoustic signals must be enabled from the terminal (refer to operating instructions of the ISOBUS terminal manufacturer).

9.3 ISOBUS „Auxiliary“-function (AUX)

Note

There are terminals which support the additional function “auxiliary” (AUX). With this function, programmable keys of the peripheral equipment (e.g. multi-function levers ...) can be assigned with functions of the connected job computers. A programmable key can also be assigned with several different functions. If key assignments are saved, accordant menus will appear on the screen when switching on the terminal.

The following functions are available in the Auxiliary (AUX) menu:

Auxiliary functions (graphic display)	Function
	Put bale down
	Start tying
	Start tying auto/manual
	Reduce set filling
	Increase set filling

9.3.1 Example of joystick assignment for Fendt (default setting)

Note
For further guidelines, please refer to the operating instructions of the terminal being used.

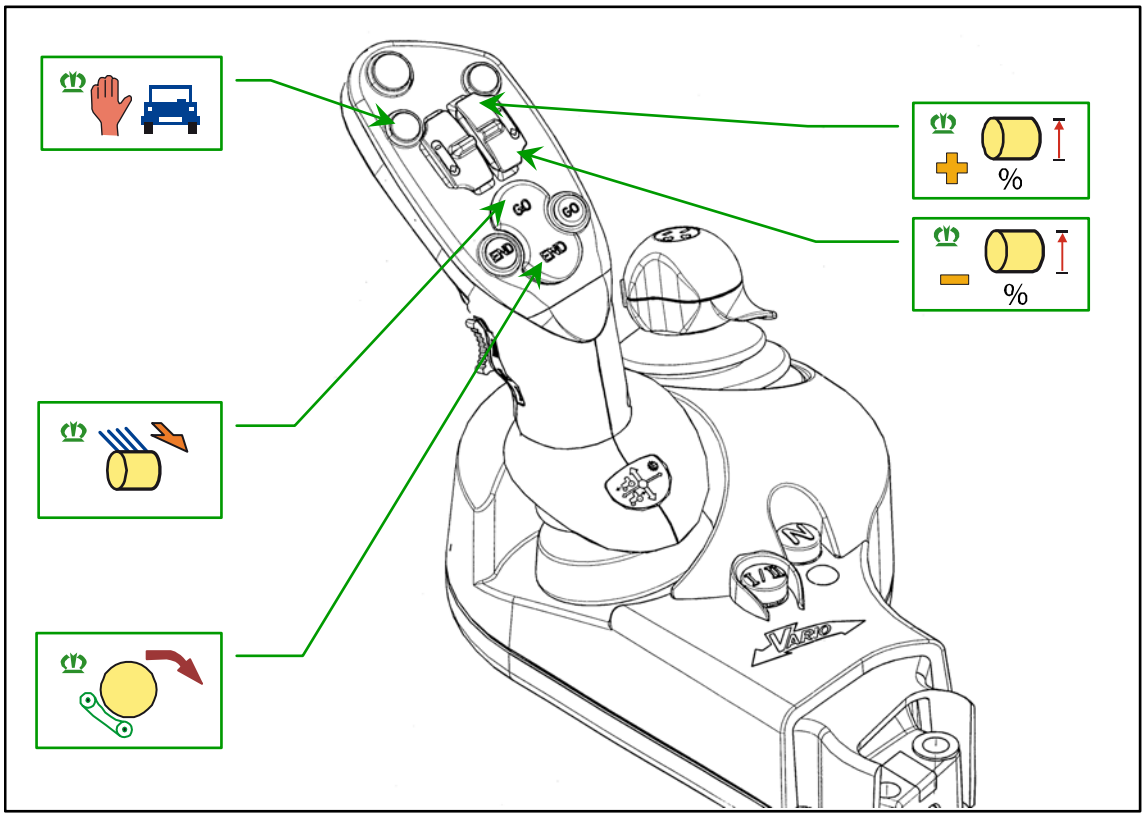


Fig. 149

9.3.2 Recommended settings for a WTK multi-function lever (default setting)

Note
For further guidelines, please refer to the operating instructions of the terminal being used.

Switch (1) on the rear in upper position (LED (2) lights up red).

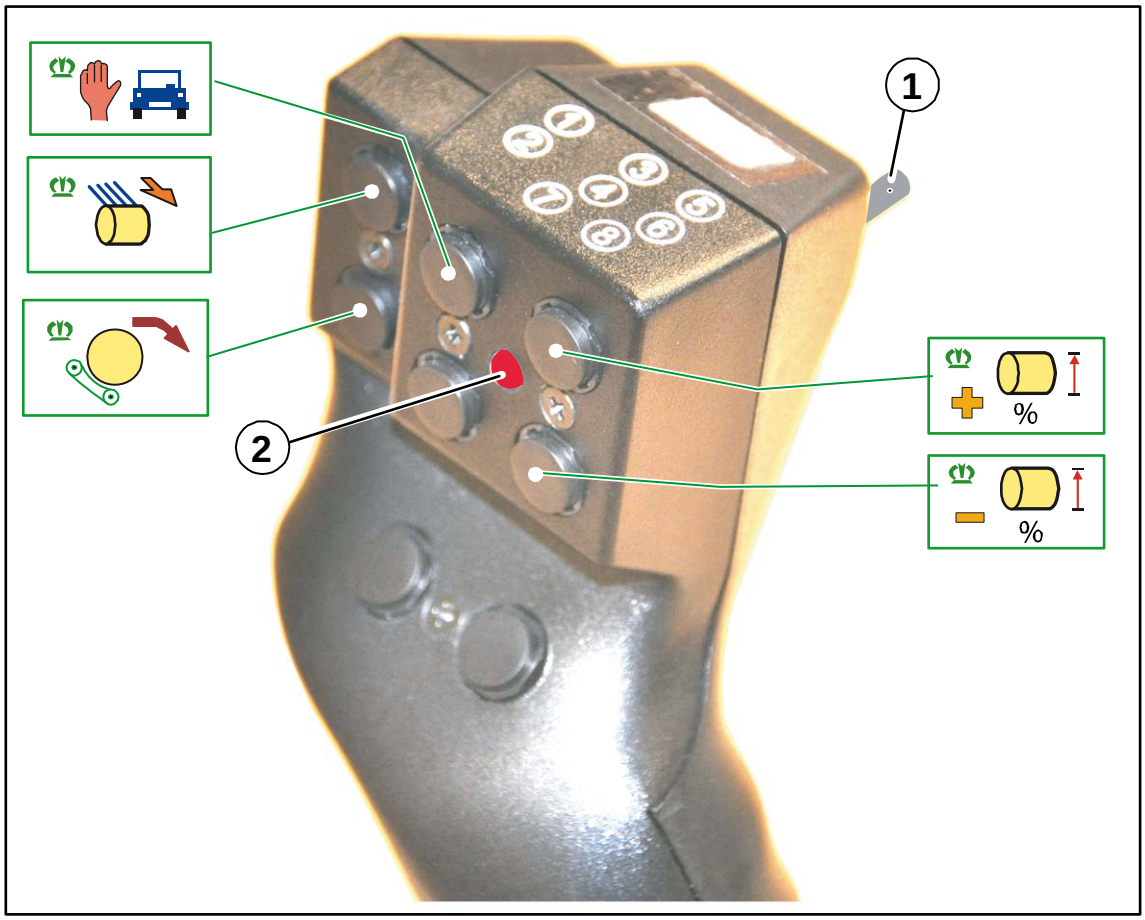


Fig. 150

10 Operation of the Hydraulic Zero Setting of Blades (Optional)

Danger! - Unexpected actions on the machine

Effect: Danger to life, injuries or damage to the machine.

- Always make certain that the drive and the engine are switched off before doing any repairs, maintenance or cleaning. Remove the ignition key!

DANGER! - The hydraulic system is pressurised!

Risk of injury due to spurting out of hydraulic oil.

- Before carrying out any maintenance work on the comfort blade control system or on the cutter base, the hydraulic system must be depressurised on tractor side as well as on machine side.

10.1 KRONE ISOBUS Terminal

10.1.1 Basic screen in case of a connected zero setting of blades (option)

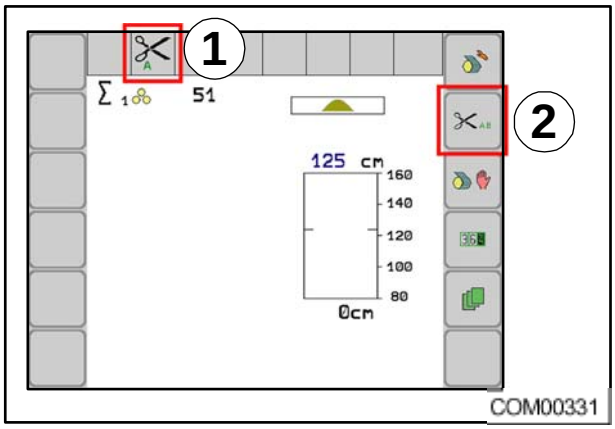


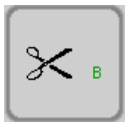
Fig. 151

In the basic screen, it is possible to select between the different blade group control systems via F2 key. In this process, the selection sequence is defined as shown in the table.

The selected blade group control system is shown in the display next to the F2 key (2).

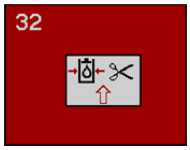
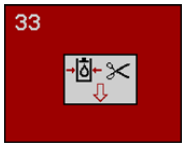
The status of the blade group control system is shown in the display in display (1).

Selection options blade group control system

	Swivelling in blade group A (activating)
	Swivelling in blade group A and B (activating)
	Swivelling in blade group B (activating)
	Swivelling out blade group A and B (deactivating)

After having selected the desired blade group control system, the prompt to swivel in or swivel out the blades via the hydraulics on the tractor appears with a delay of approx. 2 seconds:

- Prompts for activating the hydraulics on the tractor

	Swivelling in blades (activating)
	Swivelling out blades (deactivating)

The current status of the blade group control system is displayed in the basic screen.

Status displays of the blade group control system

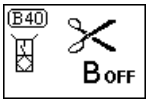
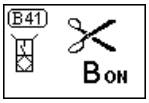
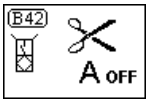
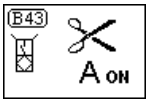
	Blade group A swivelled in (activated)
	Blade group A and B swivelled in (activated)
	Blade group B swivelled in (activated)
	Blade group A and B swivelled out (deactivated)
	Blade group A and B swivelled out and blade base down (removal of blades) (deactivated)

Note

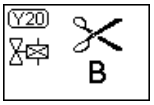
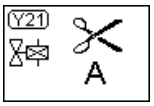
In order to be able to counteract a crop accumulation as soon as possible in the area of blades, both blade groups as well as the blade base are always lowered when swivelling out the blades. So the crop can be conveyed without any resistance into the bale chamber.

10.1.1.1 Sensor test / actuator test

Additional sensors in the sensor test in comfort blade control system

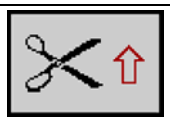
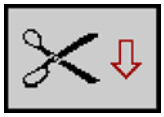
No.	Sensor symbol	Description
B40		Blade group B swivelled out
B41		Blade group B swivelled in
B42		Blade group A swivelled out
B43		Blade group A swivelled in

Additional actuators in the actuator test in comfort blade control system

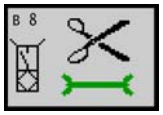
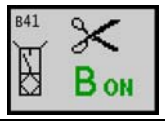
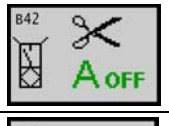
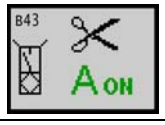
No.	Actuator symbol	Description
Y20		Valve blade group B
Y21		Valve blade group A

10.1.1.2 Alarm messages for blade comfort selection

Notes and messages

No.	Figure	Possible cause	Remedy
14		– Blade base is not closed.	– Close blade base using tractor hydraulics. – Check the setting of the "Blade base monitoring" sensor.
32		– Blade preselection has been changed	– Engage (activate) blade using tractor hydraulics
33		– Blade preselection has been changed.	– Disengage (deactivate) blade using tractor hydraulics.
34		– Blade selection A sensors set incorrectly. – "Blade A on" and "Blade A off" sensors have same signal.	– Check the setting of the blade selection A sensors.
35		– Blade selection B sensors set incorrectly. – "Blade B on" and "Blade B off" sensors have same signal.	– Check the setting of the blade selection B sensors.

Physical messages

No.	Symbol	Sensor	Possible cause	Remedy
108		Blade base position	– Sensor or line defective.	– Perform sensor test. – Check sensor and line for damage.
140		Blade B off		
141		Blade B on		
142		Blade A off		
143		Blade A on		

10.2 Hydraulic System Circuit Diagrams

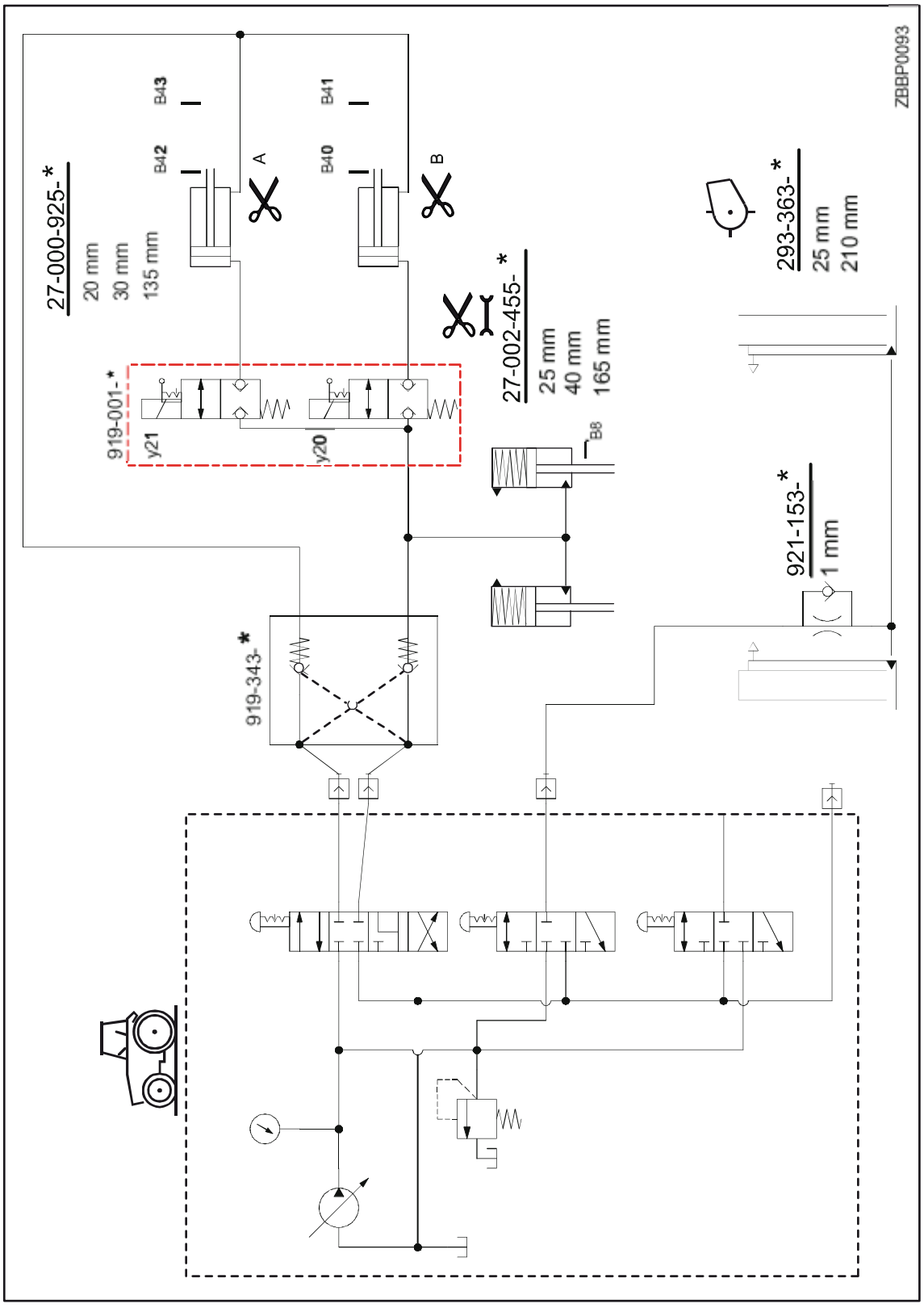


Fig. 152

11 Operation

WARNING!

If the basic safety instructions are not followed, people may be seriously injured or killed.

- To avoid accidents, the basic safety instructions in the chapter Safety must have been read and followed, see chapter Safety "Basic safety instructions".

WARNING!

If the safety routines are not adhered to, people may be seriously injured or killed.

- To avoid accidents, the safety routines in the chapter Safety must be read and followed, see chapter Safety "Safety routines".

Warning!

Risk of injury from uncontrolled movement of round bales

- On slopes, always lay down round bales in such a way that they cannot move on their own. On account of their weight and their cylindrical shape, they can cause severe accidents if they have once started moving.

11.1 Adjustments Before Starting Work

Before starting work, perform or check the following settings:

- Tighten the floor conveyor of the bale chamber (Comprima CV150/CV210 XC) (Please refer to Chapter entitled “Before Baling/After Baling")
- Working height of the Pick-up
- Position of the roller crop guide
- Switch the cutting system on or off
- Cutting length of the cutting system
- Use of the bale ejector
- Preselect the baling pressure (Comprima CF155 XC)
- Adjust the bale size (Comprima CF155 XC)
- Preselect the bale size (Comprima CV150/CV210 XC)
- Use additional tappet strips
  Insert net
- Insert sheet
- Function of the chain lubrication system
- Reset the bale counter

The Required Working Steps are Described in the Chapters “Settings” and “Operation”.

If the cutting system is switched on during baling, the bale density will increase substantially, which makes it necessary to reduce the baling pressure.

To do this:

Short, crumbly straw:

- Reduce the number of cutting blades or turn off the cutting system or remove the cutters. The blades can be stored on the left-hand side of the machine
- Switch off P.T.O. shaft in headland position

Small, flat swaths:

- Reduce PTO speed

or

- Increase travelling speed

Straw varies greatly in structure. Even if no cutting system is used, it is not always possible to work with the highest possible pressure.

Adapt the round baler setting to prevailing conditions.

Note

If the cutting system is not connected for long periods, the cutting blades can be replaced with blind blades to prevent soiling of the slots on the blade base and wear to the blades.

The blind blades can be ordered from the KRONE spare parts department under part number 200654050.

11.2 Travelling speed

The forward speed during use depends on the following factors:

- type of crops
- moisture content of the crops
- height of swaths
- ground conditions

Note

The recommended travelling speed is 5 - 12 km/h and must be adapted to local conditions in actual practice.

- Do not overload the round baler.
- When baling a round bale, reduce speed at the start and end of the baling process.

Setting in case of slip of the floor conveyor if the grass is very wet and only with little structure

- Drive with less blades or turn off the blades or remove them and reduce the baling pressure
- Adjust inner bale core to soft (see Chapter entitled “Adapt Soft Core”)

- Driving without blades

CAUTION!

Damages to the machine

- There must be no driving with blades and lowered blade base since the blades then have no guidance to the cutting system and the tine will be incised by the cutter.

11.3 Filling the bale chamber

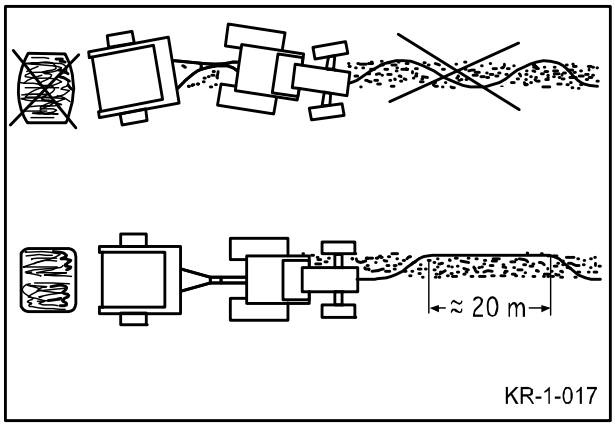


Fig. 153

To attain a consistent bale density inside a round bale, the bale chamber should be filled evenly. The swath width is an important factor here.

The swath width is optimal if the swath has exactly the same width as the bale chamber.

If the swath is wider than this, distortion of the round bales may result. The round bale will be frayed on the sides and difficult to eject from the bale chamber.

If the swath is narrow, the bale chamber can be filled evenly only by driving onto the swath from alternate sides (left/right). Do not zigzag: drive long distances on the left and right side of the swath as shown in the illustration. Too frequent changes and uneven filling of the bale chamber will produce barrel-shaped round bales and uneven bale density.

The reached diameter can be read off the monitor of the operation terminal.

The baling pressure that is reached can be read on the baling pressure indicator on the left side of the machine.

Note

Overloading the machine with bales that are too tight or too large can result in serious damage to the machine. The machine has a mechanism that triggers forced tying automatically in case of overload. Each forced tying is automatically documented.

Comprima CV 150 / CV 210 XC

Note

Barrel-shaped round bales can cause damage to the floor conveyor. Distorted and thick round bales are detrimental to proper silage production.

Note

To prevent overload on the round baler when handling certain types of crop (e.g. wet silage), the baling pressure should be reduced. The baling pressure should never be set above 200 bar.

Comprima CF 155 XC

Note

The binding process should be started at the latest when the baling pressure indicators reach the red range (the buzzer sounds if the comfort electronic system is fitted).

Note

To prevent overload on the machine when handling certain types of crop (e.g. wet silage), the binding process should already be started at an earlier point.

Permanent overload of the machine can drastically reduce the service life.

11.3.1 Reducing the Pressure on the Side Walls of the Bale Chamber

For very critical forage and extremely hard bales, the bales can be given additional protection against turning as follows:

- In order to reduce the pressure on the side walls there should not be extreme driving to the right/left
- Reduce the number of the outer cutting blades or turn off the cutting system or remove the cutters

11.3.1.1 Assembly of Additional Tappet Strips on the Starter Roller

WARNING! – Unintentional closing of the tailgate!
Effect: severe injuries.
- Secure the open tailgate to prevent it from closing unintentionally.

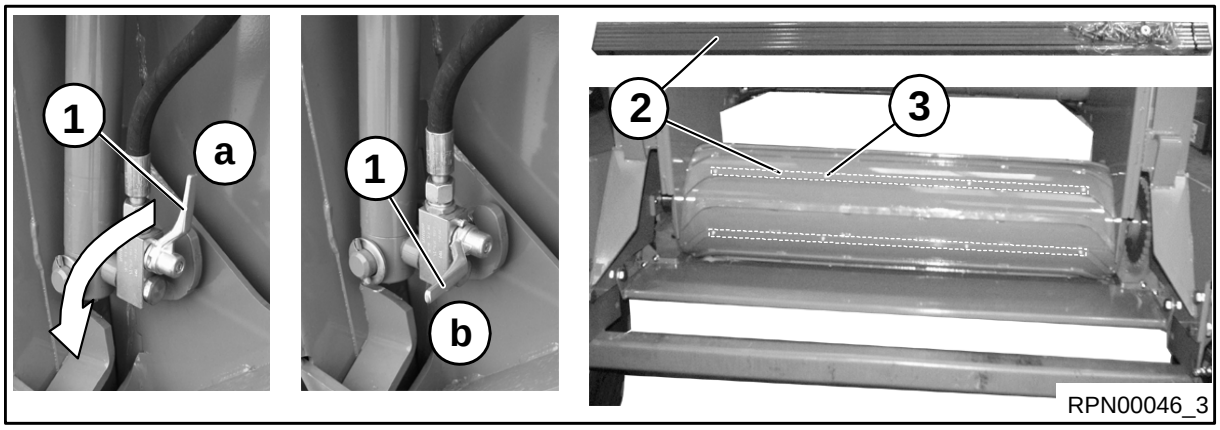


Abb. 154

The assembly of additional bars (2) on the starter roller is recommended to increase the protection against turning of the bales.

Assemble the bars (2) on the starter roller in the inside of the bale chamber:

- Swivel the shut-off valve (1) in the return of the left lifting cylinder from position (a) to position (b), the tailgate is locked hydraulically.
- Open the tailgate.
- Assemble the 6 bars (2) on the starter roller and fasten them with countersunk screws (3)
- Swivel the shut-off valve (1) in the return of the left lifting cylinder from position (b) to position (a), the tailgate is locked hydraulically.
- Close the tailgate.

11.3.1.2 Assembly of Additional Ejector Plates in the Tailgate

Comprima CF 155 XC

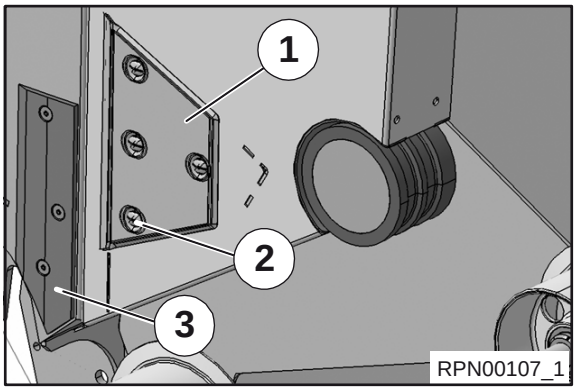


Fig. 155 View (closed bale chamber)

If the completed bales do not fall out of the front bale chamber, two ejector plates (1) can be assembled right and left in the tailgate of the machine.

- Install the ejector plates (1) with the screws (2) on the insides of the bale chamber into the existing bore holes.
- If the completed bales do even not fall out of the front bale chamber after having installed the ejector plates (1), remove the sliding plates (3) from the machine housing right and left.

The ejector plates (1) can be ordered with suitable screws from KRONE spare part storage by stating the following spare parts no.:

Units	Spare part	Spare parts no.
2	Ejector plate	2754790

Comprima CV 150 XC

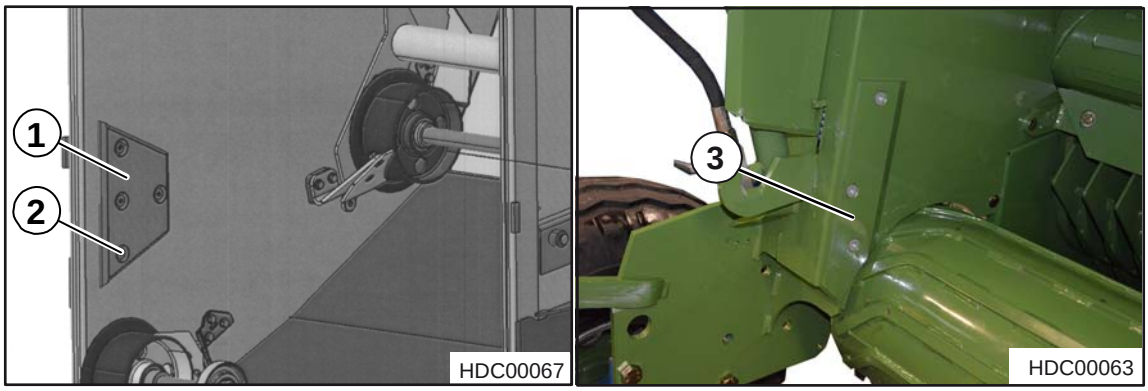


Fig. 156

If the completed bales do not fall out of the front bale chamber, two ejector plates (1) can be assembled right and left in the tailgate of the machine.

- Install the ejector plates (1) with the screws (2) on the insides of the bale chamber into the existing bore holes.
- If the completed bales do even not fall out of the front bale chamber after having installed the ejector plates (1), remove the sliding plates (3) from the machine housing right and left.

The ejector plates (1) can be ordered with suitable screws from KRONE spare part storage by stating the following spare parts no.:

Units	Spare part	Spare parts no.
2	Ejector plate	2754790

Comprima CV 210 XC

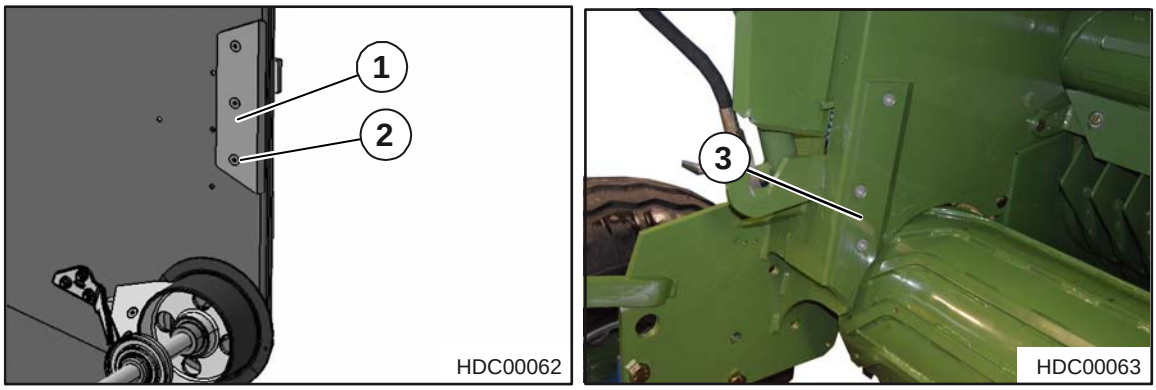


Fig. 157

If the completed bales do not fall out of the front bale chamber, two ejector plates (1) can be assembled right and left in the tailgate of the machine.

- Install the ejector plates (1) with the screws (2) on the insides of the bale chamber into the existing bore holes.
- If the completed bales do even not fall out of the front bale chamber after having installed the ejector plates (1), remove the sliding plates (3) from the machine housing right and left.

The ejector plates (1) can be ordered with suitable screws from KRONE spare part storage by stating the following spare parts no.:

Units	Spare part	Spare parts no.
2	Ejector plates	200679180
6	Countersunk screw with hexagonal socket	9040453

Note

If the ready bale jams in the tailgate and is raised when the tailgate is opened, the discharge plates (1) must be removed.

11.4 Tying and depositing bales

- Just before the net is fed, ensure that you are driving centred over the swath. This will ensure that the net is drawn along evenly over the edges.
- Start the tying and/or wrapping process (see chapter Operation). Continue receiving crops until the tying or wrapping material from the crop is conveyed into the bale chamber and caught by the round bale. The nominal speed of 540 1/min must be maintained until the tying process is complete.
- Stop the tractor and wait until the tying or wrapping process is complete.
- Transfer round bale to the wrap system.
- When the bale chamber has been closed again, start the next baling process.
- The round bale on the swivel table is wrapped in film during the baling process.
- In automatic mode the bale is deposited by the swivel table after the next tying process has started. The bale can be deposited manually at any time outside the tying process (also in automatic mode).
- If the bale is deposited while the tractor is moving, the film must be checked, as the film may be damaged depending on the surface.

Note

If sheet is wrapped around the bale a second time, the sheet must first be cut off manually.

11.5 Before Baling

11.5.1 Detaching the bale cloth

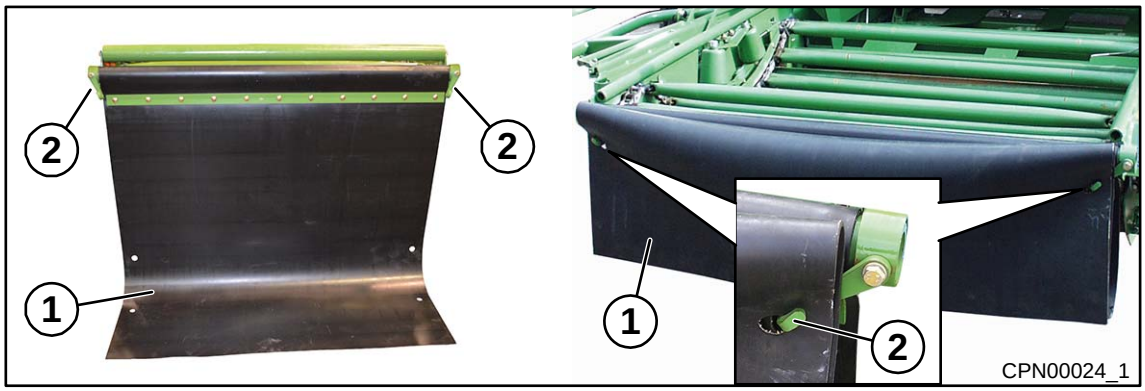


Fig. 158

- Remove the bale cloth (1) from the side hooks (2).

11.5.2 Tensioning the floor conveyor

Comprima CV 150 / CV 210 XC

Note
Clamp the floor conveyor of the bale chamber before the P.T.O. shaft is turned on.

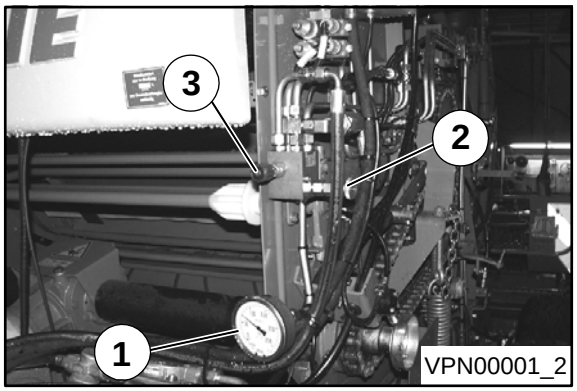


Fig. 159

To do this:

- Screw in the handwheel (2) completely (working position)

After an extended standstill time of the machine and before it is started up for the first time:

- Open the tailgate and close it again once (see menu “Manual Operation Baler”, open/close bale chamber)
- Turn on the PTO shaft

This will build up the baling pressure to the factory setting or the last pressure set.

The baling pressure can be changed with the turn dial (3) (see Chapter entitled “Baling pressure setting”

Due to the hydraulically design of the accumulator connection block it can occur that the baling pressure drops throughout a certain period of time. In order to reach the set baling pressure again, open the tailgate once again and close it.

11.6 After Baling

11.6.1 Releasing tension on the floor conveyor

Comprima CV 150 / CV 210 XC

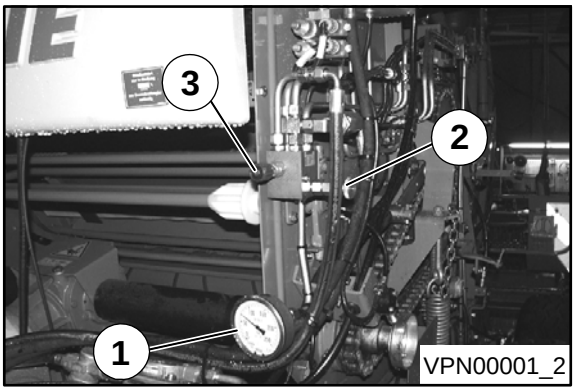


Abb. 160

The tension on the front and the rear floor conveyor must be released after baling work is complete.

- Loosen handwheel (2) until the display of the pressure gauge (1) shows a pressure of 50 bar (Parking position)
- Tighten handwheel (2) again

The clamping cylinders of the floor conveyors are depressurised.

11.7 Overload protection

11.7.1 Drive Chain for Pick-up with Cam-type Clutch

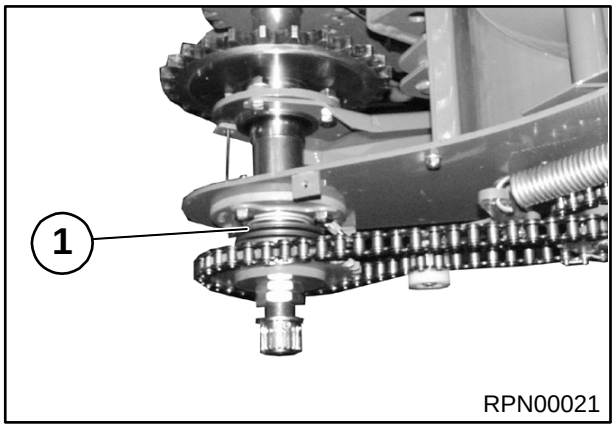


Fig. 161

CAUTION!

Damage to the machine and loss of the warranty claim

- Do not perform any manipulation on the cam-type clutch on your own

The drive is fitted with a cam-type clutch (1) as a protection against overload. This coupling has been set in the works of the manufacturer and may not be adjusted without prior harmonisation with the KRONE after-sales staff.

11.8 Pick-up

11.8.1 Default Setting (Working Height Setting)

Note
Lift the Pick-up for driving in the headland or when driving backward!

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

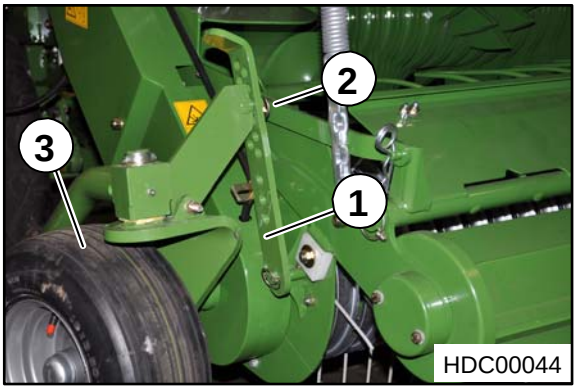


Fig. 162

Note
When adjusting the pick-up, the drawbar height of the machine must be adjusted to the tractor (see chapter "Initial start-up").

The distance from the tines to the ground must be about 20 – 30 mm.
Adjust the pick-up working height according to the prevailing ground conditions.
Default setting (the setting must always be the same on both sides):

- Raise the pick-up (3) hydraulically
- Remove the linch pin (2)
- Set the perforated bar (1) in the required position
- Secure in place using the linch pin (2)

11.8.2 Bearing Pressure Relief of the Pick-up

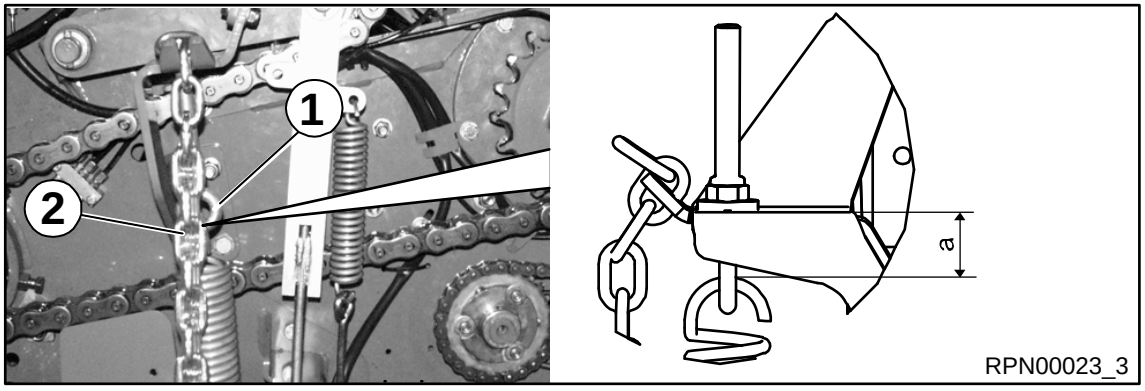


Abb. 163

In order to be able to pass over unevenness better, the pick-up is supported by means of two springs.

The springs can be set by means of the ring bolt (1). Both springs should be set equally.

In the default setting, dimension a is:

- left 150 mm
- right 42 mm

Note

Load on the guide wheels must be sufficiently relieved.

For extreme soil conditions, regulate the raking height of the pick-up with the chains (2) on both sides (right and left-hand side of the machine):

- Raise the Pick-up hydraulically
- Move the guide wheels (3) up
- Set the desired raking height of the pick-up by suspending the chain (2)

Note

When used in straw, the pick-up should be set as high off the ground as possible.

Use the chain (2) to adjust the pick-up guide wheels in that way that they do not touch the ground.

Note

If the pick-up is hooked in higher, the height of the drawbar must be adjusted

(see Chapter entitled Start-up “Adapt Drawbar Height”).

11.9 Roller crop guide

WARNING!

Risk of injury if the machine is used without a roller crop guide!

If the machine is operated without a roller crop guide, people can be seriously injured or killed.

- The roller crop guide is used for accident protection and must not be removed during operation.

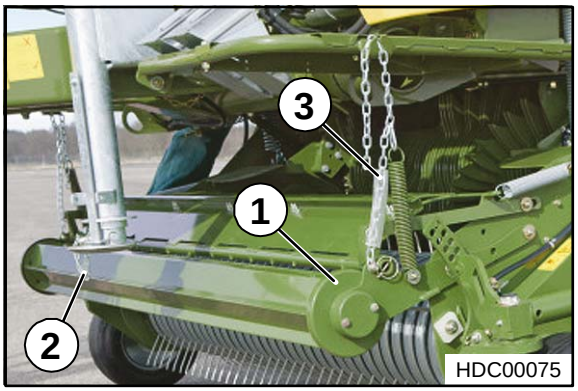


Fig. 164

The roller crop guide (1) makes it possible to regulate how crop is moved. It ensures that the pick-up collects crop evenly.

Adjust the height of the roller crop guide (1) so that the holding-down roller (2) runs continuously above the swath.

Height of the roller crop guide:

For large swaths, the roller crop guide (1) can be adjusted to forage weights.

To do this, hook in the chains (3) correspondingly higher.

Note

The setting must be the same on both sides of the roller crop guide.

11.10 Adjusting the baffle plate

Comprima CV 210 XC

The height of the baffle plate (1) can be adjusted to the swath. Position I is the factory default setting. If the crop is very moist, moving the baffle plate to position II is recommended.

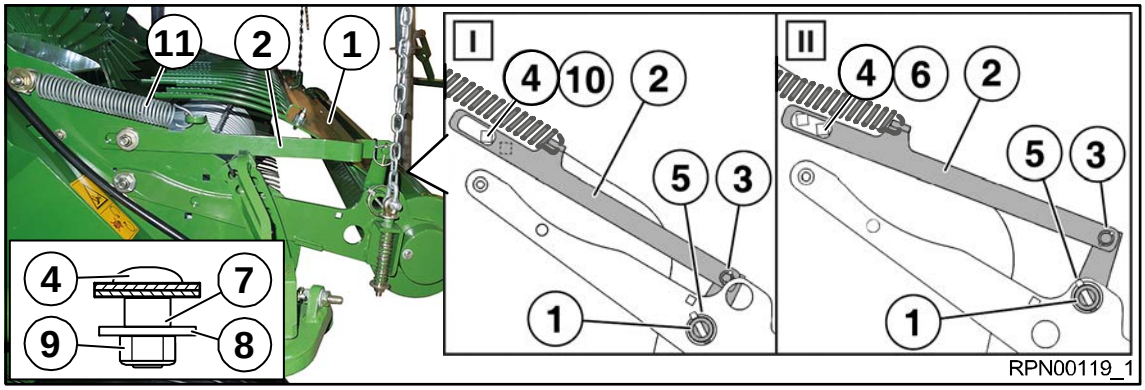


Fig. 165

Moving the baffle plate (1) from position I to position II

On the left and right side of the machine

- To remove the bracket (2),
  - remove the linch pin (3).
  - unscrew the round-head bolt (4).
  - remove the spring (11).
  - detach the bracket.
- Remove the linch pin (5).
- Move the baffle plate (1) to the upper bore and secure with the linch pin (5).
- To fit the bracket,
  - insert the round head bolt (4) into the front square hole (6) and secure with a spacer tube (7), washer (8) and locknut (9).
  - place the bracket on the bolt (3) and secure with the linch pin (3).
  - mount the spring (11).

Moving the baffle plate (1) from position II to position I

On the left and right side of the machine

- To remove the bracket (2),
  - remove the linch pin (3).
  - unscrew the round-head bolt (4).
  - remove the spring (11).
  - detach the bracket.
- Remove the linch pin (5).
- Move the baffle plate (1) to the lower bore and secure with the linch pin (5).
- To fit the bracket,
  - insert the round head bolt (4) into the rear square hole (10) and secure with a spacer tube (7), washer (8) and locknut (9).
  - place the bracket on the bolt (3) and secure with the linch pin (3).
  - mount the spring (11).

11.11 Cutting system

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

11.11.1 General Aspects

The machine has a cutting system with a cutting cylinder and fixed blades. Cutting allows for improved further processing of the round bales and makes it possible to increase the density of baled material. The blades can be swivelled out of the conveyor channel from the tractor hydraulically if there are blockages. The cutter safety mechanism prevents the cutters from being damaged by foreign objects.

It is also possible to switch off the cutting system mechanically.

11.11.2 Cutting length

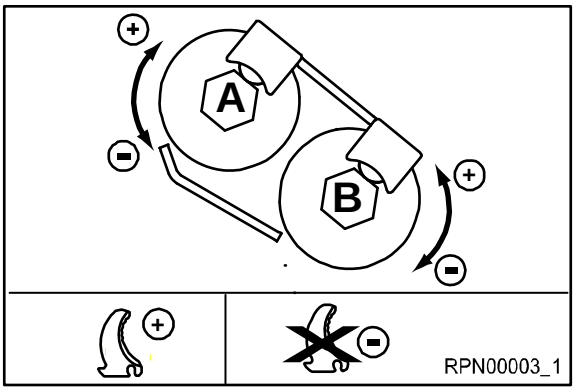


Fig. 166

The cutting length is determined by the number of blades.

Use the key supplied to make adjustments.

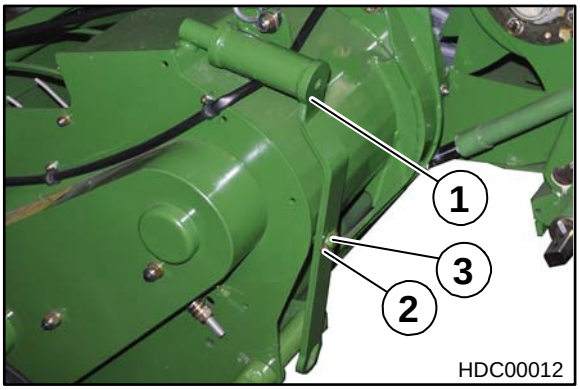


Fig. 167

The multi-purpose key (1) can be found on the pick-up on the left-hand side of the machine.

CAUTION! - Unexpected movement of multi-purpose key!

The multi-purpose key can move suddenly due to the spring force of the pretensioned blades.

- Particular caution is thus advised when making adjustments to the blade shaft using the multi-purpose key.

To remove the key:

- Remove the spring cotter pin (2).
- Pull the multi-purpose key (1) off the retaining bolt (3).

After use, push the multi-purpose key (1) back onto the bolt (3) and fix it in place with the spring cotter pin (2).

Table Cutting Length depending on Blade Equipping
In case of 17 blades:

Cutting length	Number of Blades	Setting A/B
-	0	- / -
128 mm	8	- / +
128 mm	9	+ / -
64 mm	17	+ / +

In case of 26 blades:

Cutting length	Number of Blades	Setting A/B
-	0	- / -
84 mm	13	- / +
84 mm	13	+ / -
42 mm	26	+ / +

CAUTION! - Blades fold back!

The blades are pre-tensioned via spring force. Risk of injury!

Never press the blades into working position manually.

- Use a tool, for example a hammer.
- Always wear protective gloves.

Caution! - Risk of injury

Risk of injury on the blade in the blade bar!

- Always wear protective gloves.

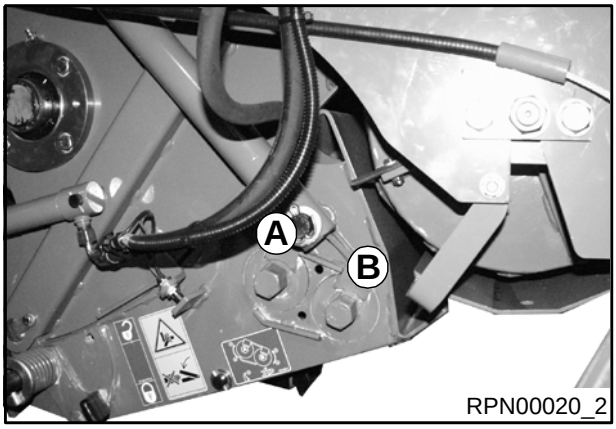


Abb. 168

After turning on the blades, always check to see whether all the cutters have swivelled up.

If this is not the case:

- Move the blade control shafts (A/B) to the zero position of blades (turn both blade control shafts (A/B) to position (-))
- Lower the conveyor floor mechanically or hydraulically
- Clean the cutter base and especially the cutter slots thoroughly

After cleaning:

- Set the desired chop length

After the blade control shafts (A/B) have been adjusted, the cutters automatically swivel back up into working position.

If they have not, lightly tap any blades that have not already swivelled up with a tool (for example a hammer) striking the back of the cutters to move them back to working position.

- Raise the cutter base.

11.11.3 Zero position of the cutter

WARNING! – Blades are pre-tensioned with spring force!
Risk of injury when attaching or removing the blades.
- Wear suitable gloves when touching the blades.

Blades are installed and removed from behind when the tailgate is open.
- Open tailgate.

WARNING! – Unintentional closing of the tailgate!
Effect: severe injuries.
- Secure the open tailgate to prevent it from closing unintentionally.

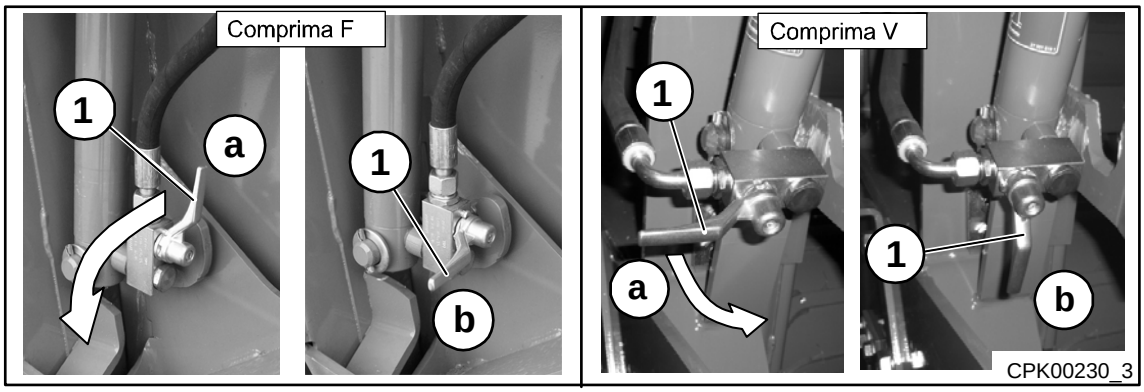


Fig. 169
- Swivel shut-off valve (1) in the return of the left lifting cylinder from position (a) to position (b), the tailgate is locked hydraulically.

CAUTION! - Damage to the Machine!
- Before lowering the cutter base, always raise the Pick-up

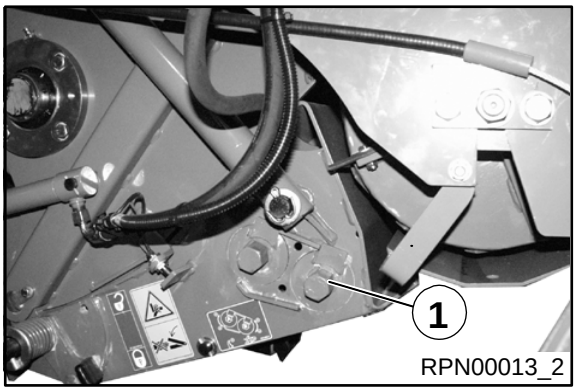
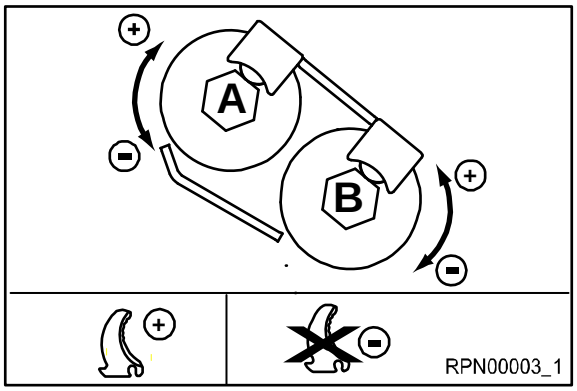


Abb. 170

- Lower the cutter base (1) mechanically or hydraulically

Move the Blade Control Shafts (A/B) Mechanically Into the Blade-0-Position (Position (-)):



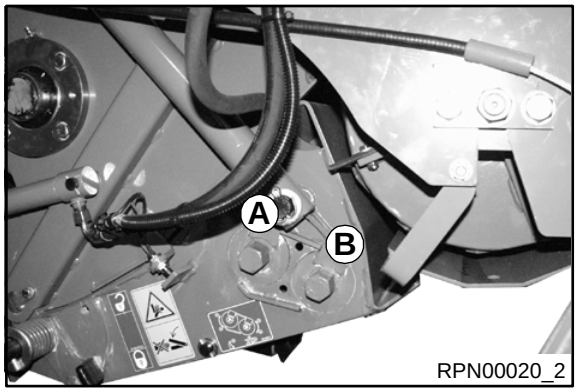


Abb. 171

- Turn the blade control shafts back so that the blades extend somewhat into the cutting channel and are easier to grasp

Unlocking the Blade Shaft

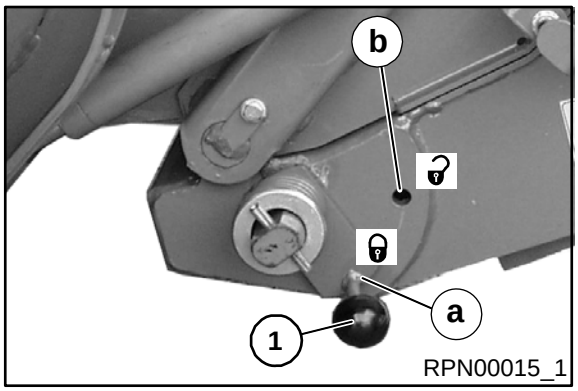


Abb. 172

- Unlock blade shaft:
  Pull the locking bolt (1) out of position (a) and allow it to engage in position (b)

Note
The supplied key can also be used for locking/ unlocking the blade shaft.

Changing Blades

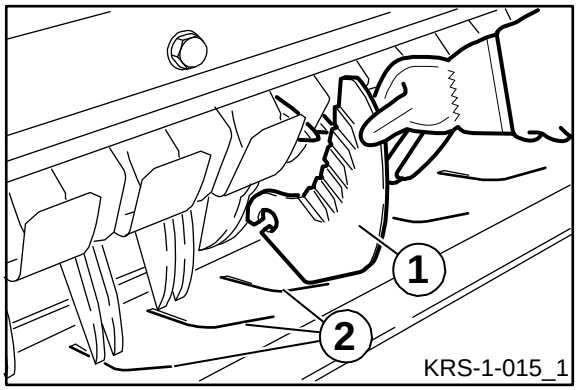


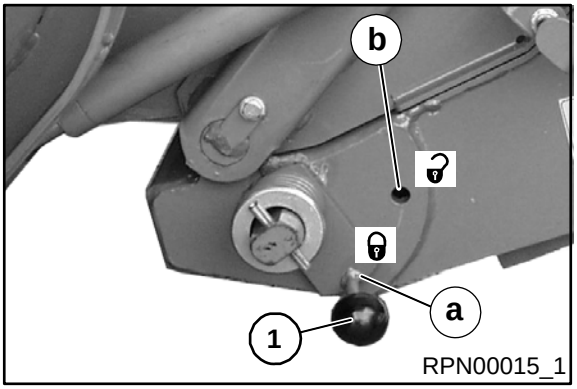
Abb. 173

- Remove the blades (1)

Note
When inserting the blades (1), ensure that they are located correctly on the blade shaft and centred in the slot (2).

- Insert a new or a ground blade (1)

Note
Before the cutter base is raised, check if all blades (1) form a straight line and if they are thus correctly installed.



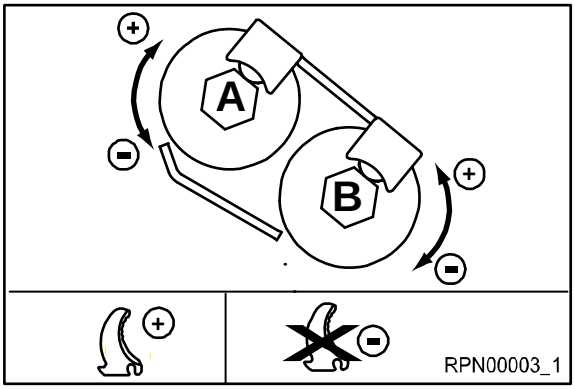


Abb. 174

- Lock the blade shaft:
  Pull the locking bolt (1) out of position (b) and allow it to engage in position (a).
- Adjust the cutting length (turn blade control shafts (A/B) in “+” position)

After the cutter control shafts have been adjusted, the cutters automatically swivel back up into working position.

- Check to make certain all the cutters have swivelled up If they have not, lightly tap any blades that have not already swivelled up with a tool (for example a hammer) striking the back of the cutters to move them back to working position

WARNING! - Blades are pretensioned with spring force!

High risk of injury when attaching or removing the blades.

- Never press the blades manually into working position. Always use a tool (for example a hammer).

Note

If the cutting system is not connected for long periods, the cutting blades can be replaced with blind blades to prevent soiling of the slots on the blade base and wear to the blades.

The blind blades can be ordered from the KRONE spare parts department under part number 200654050.

11.12 Setting the Bale Diameter

Comprima CF 155 XC

The tailgate must be closed and the bale chamber must be empty.
Adjust the bale diameter at the rear right and left of the machine.

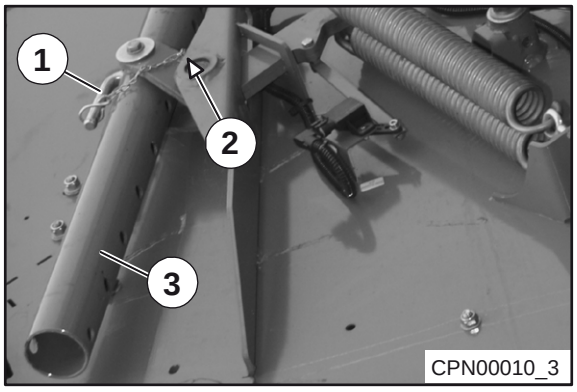


Fig. 175
Upper hole = Smallest bale diameter
Lower hole = Largest bale diameter

- Detach the split pin (2) from the locking bolt (1) on the spring tube (3).
- Insert the locking bolt (1) into the desired bore on the spring tube (3) and secure with the split pin (2).

Note
The setting must be the same on both sides.

Note
If the bale diameter is changed mechanically, the new dimension should be entered in the terminal using the "Bale diameter" menu.

11.13 Setting Baling Pressure

Comprima CV 150 / CV 210 XC

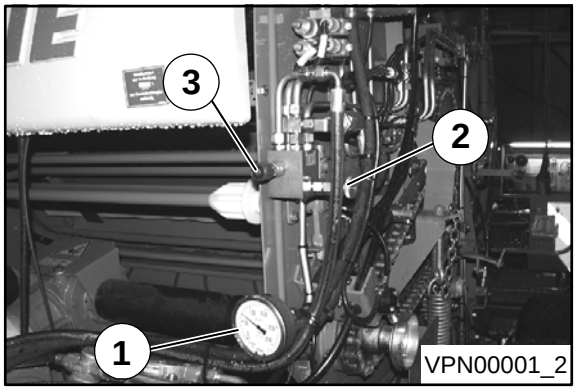


Fig. 176

The setting of the baling pressure is carried out on the machine.

The following steps have to be taken for baling pressure setting:

- Turn the handwheels (2 and 3) all the way in (observe minimum baling pressure; see below if the baling pressure has fallen below 50 bar)
- Receive crop with the machine until the baling pressure builds up to about 10 bar higher than the desired baling pressure
- Set the desired pressure by using the handwheel (3)

Clockwise = increase the pressure

Anticlockwise = decrease the pressure

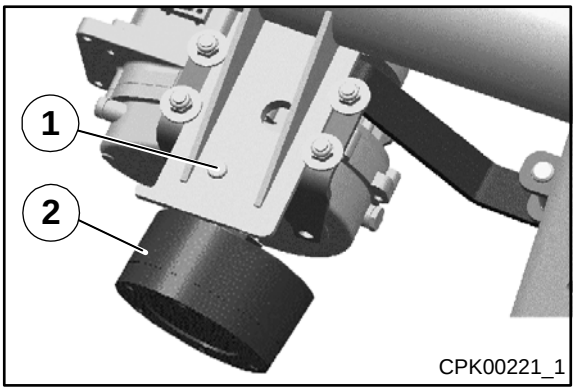
Note

The baling pressure will only adjust itself when crop is being supplied to the chamber.

The maximum pressure must not exceed 180 bar.

The minimum pressure must not fall below 50 bar. Do not use the machine to perform work at a baling pressure of less than 50 bar.

Comprima CV 150 XC



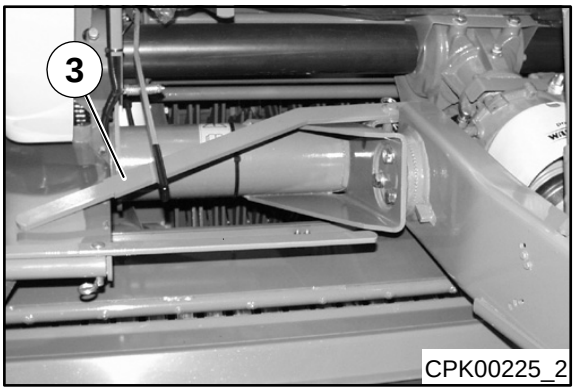


Fig. 177

After an extended standstill time prior to placing the machine into service again (only if the baling pressure has dropped below 50 bar):

- To uncouple, remove the cotter pin and bolt (1) for the slip-on gear (2)
- Use a lever (3) to pull out the slip-on gear (2) and disconnect with the bolt
- Switch on tractor PTO
- Open tailgate once and close again to build up minimum pressure
- Then set the desired baling pressure as described above
- Switch off tractor PTO
- Insert the slip-on gear (2) again and secure with bolt and cotter pin (1)

Note

A pressure range of 50-180 bar is preset for the baling pressure setting.

Crop	Pressure range (bar)
Hay	low
Straw	medium/high
Silage	high

Comprima CV 210 XC

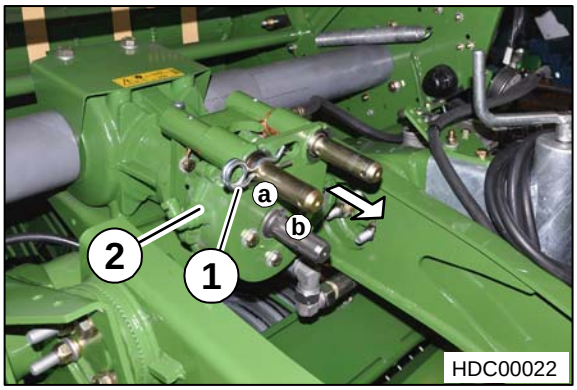


Fig. 178

After an extended standstill time prior to start-up of the machine (only if the baling pressure has dropped below 50 bar):

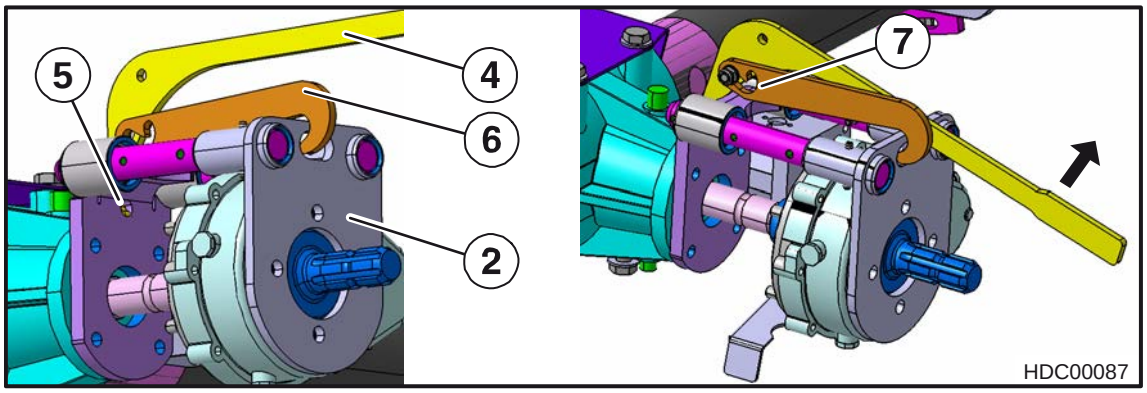


Fig. 179

- Hook hand lever (4) into the bore hole (5) and hook (6) into the oblong hole of the slip-on gear (2). The hand lever can be readjusted in the oblong hole (7) of the hook (6), if necessary.
- Push the slip-on gear (2) into position (a) by using hand lever (4) and secure with cotter pin (1).
- Remove auxiliary device and put it down in the twine box.

Note

A pressure range of 50-180 bar is preset for the baling pressure setting.

Crop	Pressure range (bar)
Hay	low
Straw	medium/high
Silage	high

11.14 Net Wrapping

11.14.1 Net wrapping parts

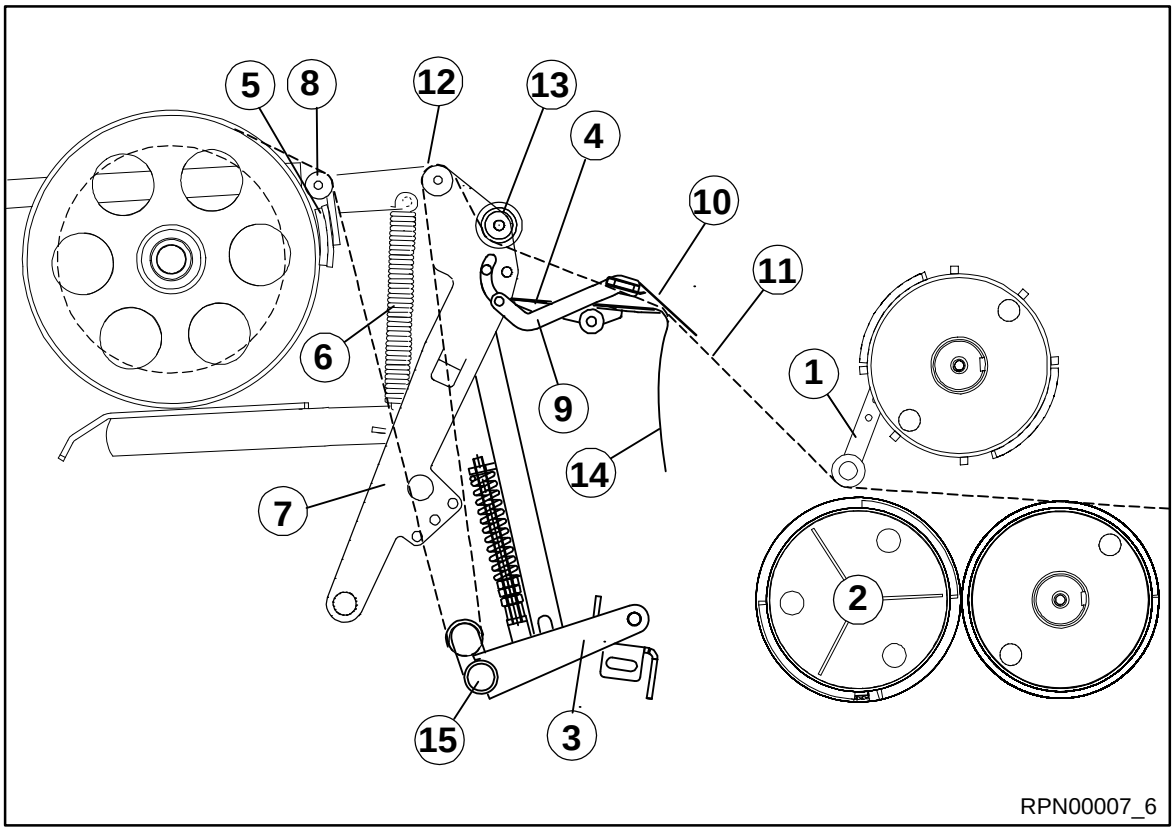


Fig. 180

1 Blade bar
2 Feed roller
3 Net compensation
4 Retaining plate
5 Net brake
6 Net brake spring
7 Net rocker arm
8 Deflection shaft
9 Retaining clip
10 Synthetic cloth
11 Net
12 Spreading bracket
13 Spreading roller
14 Plastic guide
15 Fixed cross tube

11.14.2 Function of the Net Tying

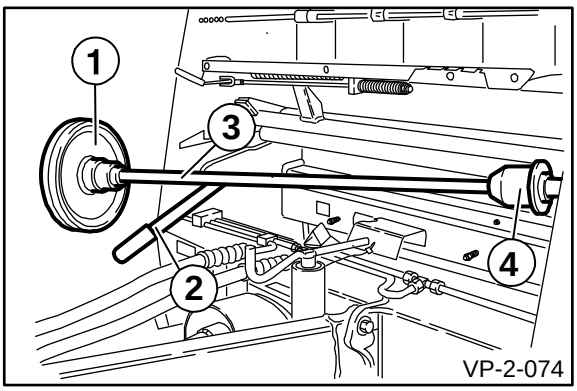
The rocker arm (7) is used to lay the net onto the feed roller (2) and from this roller it is passed through the compression rollers to the bale. Then it is trailed by the bale. After the wrapping process is complete, the blade bar (1) is swung and cuts the net.

11.15 Inserting Net Roll

CAUTION! – Contamination of the twine and tying mechanism by oil and grease
Effect: Machine damage and problems when unrolling twine
- The twine, twine tensioner and eyes must not be contaminated by oil or grease.
- The parts of the tying unit through which twine or net run must not be contaminated by oil or grease.

WARNING!
Risk of injury due to unexpected movement of a machine component.
- The net may only be inserted by one person.
- Make sure that there is no other person in the range of movement of the machine.

Note
The starting end of the net roll must point towards the machine and be pulled out from the top.



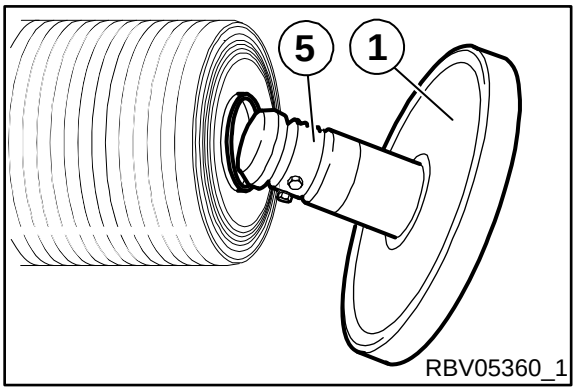


Fig. 181

The preparations and insertion of the twine roll must be accomplished with machine at standstill:
- Switch off tractor P.T.O. shaft
- Switch off tractor engine
- Raise the lever (2)
- Swing the brake disc (1) with the net roll mounting shaft (3) forwards
- Detach the brake disc (1)
- Slide the net roll onto the net roll mounting shaft (3) and the support (4)
- Slide the brake disc (1) and cardboard tube clamp (5) counterclockwise into the cardboard tube and then onto the net roll mounting shaft as far as possible

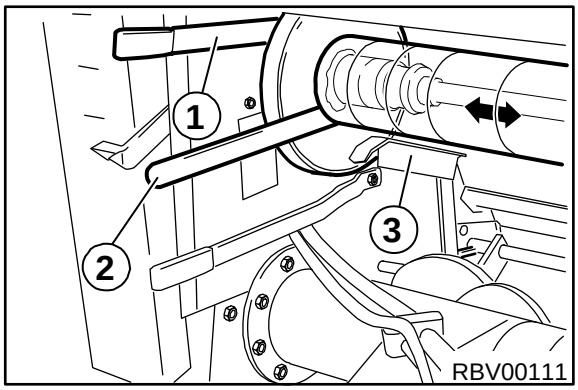


Fig. 182

- Once installed, the net roll can be aligned to the right and left in the centre to the machine using the mounting lever (2).
- To pull the net, release the brake. To do this press the lever (1) downwards.
- Place the net brake buttons (3) below the net roll.

11.15.1 Insert Net

WARNING! - Risk of Cuts Due to Sharp Cutters!

Serious injuries; especially to hands.

- Wear protective gloves when working in the area of the blades and the blade bar
- Wear also protective gloves when threading in or removing the net

CAUTION! – Contamination of the twine and tying mechanism by oil and grease

Effect: Machine damage and problems when unrolling twine

- The twine, twine tensioner and eyes must not be contaminated by oil or grease.
- The parts of the tying unit through which twine or net run must not be contaminated by oil or grease.

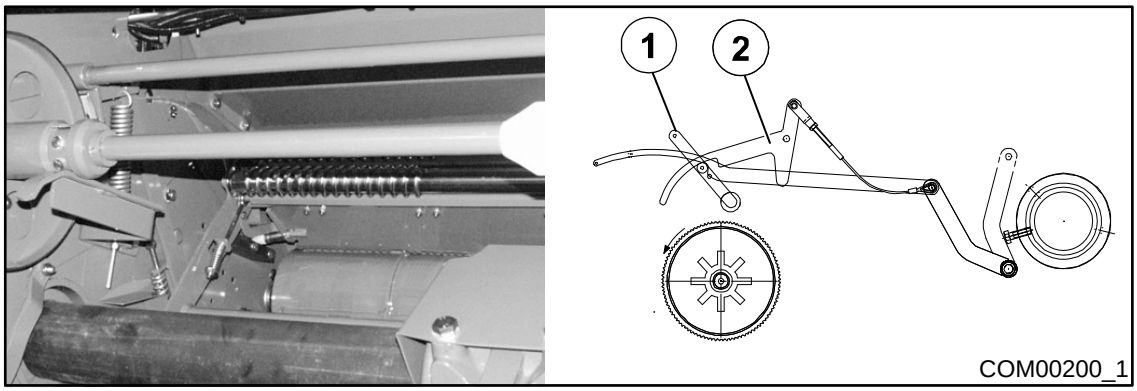


Fig. 183

- Before threading in the net, press the blade bar (1) back with your hand until the ratched mechanism (2) engages

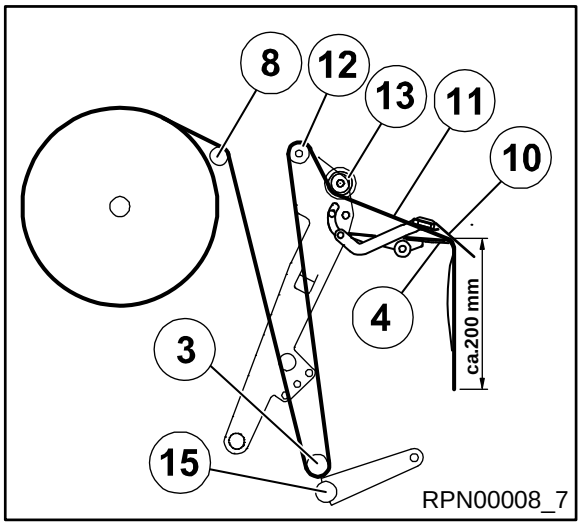


Fig. 184

- Guide the net (11) over the deflection shaft (8) under the net compensation (3)
- Place the net (11) further over the spreading bracket (12) and under the guide roller (13) round, over the retaining plate(4) and guide it under the synthetic cloth (10)

Note

To increase net tension (extend net further outward), the net can also be laid under the cross tube (15). The net must be stretched with no problems when doing this.

The net must be approx. 200 mm above the retaining plate (4).

- Swing the net roll mounting shaft back into its support

Note

After threading in, the net must be removed on a width of approx. 500 mm. Thus the tappets of the feed roller can pick up the net cleanly.

11.15.2 Setting of the Feed Position

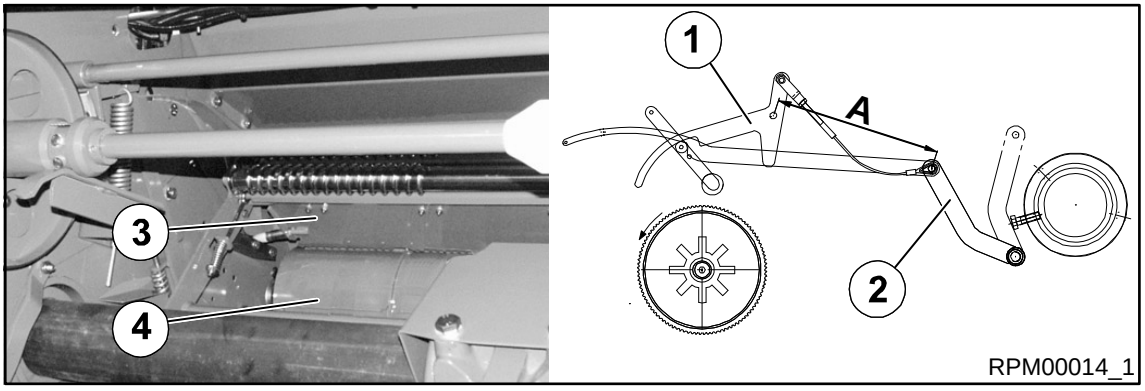


Fig. 185

An optimum adjustment of the feed position has been reached when the feeder plate (3) of the net has moved out just far enough that there is still a small gap between the feeder plate (3) and the conveyor roller (4).

The dimension between the pivot point of the ratchet (1) and the operating lever (2) must be “A” = 285 mm.

In Case of Deviations, Set the Dimension “A” As Follows:

- Call menu “Manual sensor test” in the operation terminal.
- Move the engine out over the control unit dimension A between the pivot point of the ratchet mechanism (1) and the adjusting lever (2) A = 285 mm. Only a little gap is allowed to be existent between feeder plate (3) and conveyor roller (4).
- Save these feed position via a control unit.

11.15.3 Setting of the Tying Position

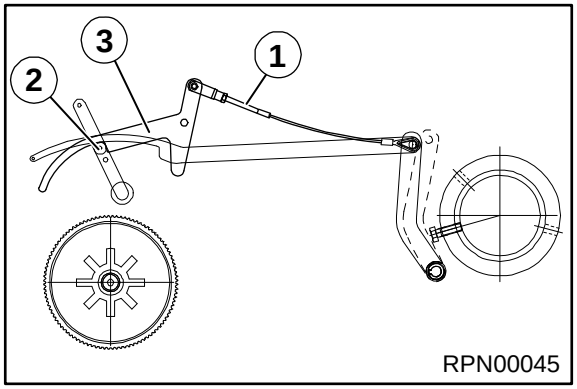


Fig. 186

- Call menu “Manual Sensor Test” in the operation terminal.
- Initiate tying position by pressing the corresponding key.
- The engine automatically approaches the tying position.

Note

Once the engine has reached the tying position, the cable (1) must not be tight and the roller (2) must be resting in front of the ratchet mechanism (3). If this is not the case, check the settings of the cut-off position and the feed position and adjust, if necessary.

11.15.4 Selecting the Number of Net Winds

The number of net winds is set at the control.

KRONE ISOBUS-Terminal (comfort controls)

In Comfort electronics, the default bale size and the number of net winds are used to automatically determine the net length.

11.15.5 Setting Cut-off Position

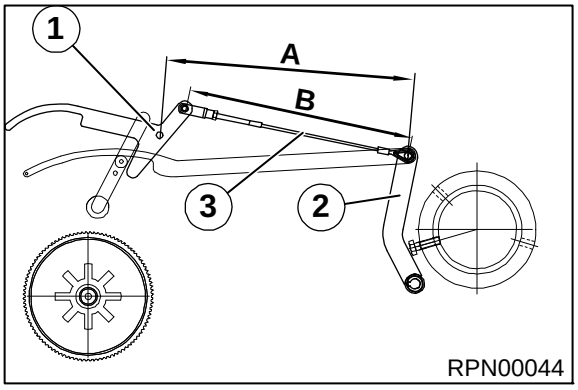


Fig. 187

The cut-off position has been reached, when the ratchet mechanism (1) is raised and dimension A between the ratchet mechanism (1) and the adjusting lever (2) is A= 410 mm.

If this is not the case, please proceed as follows:

- Call menu “Manual sensor test” in the operation terminal
- Move the engine in over the control unit until dimension A between the pivot point of the ratchet mechanism (1) and the adjusting lever (2) is A = 2 mm
  If the dimension A = 410 mm is reached, save the cut-off position.
- Adjust the cable (3) to dimension B = 365 mm

Note

If the net is not cut off by practical use, the dimension must be set to 360 mm.

11.16 Adjusting Soft Core

Comprima CV 150 / CV 210 XC

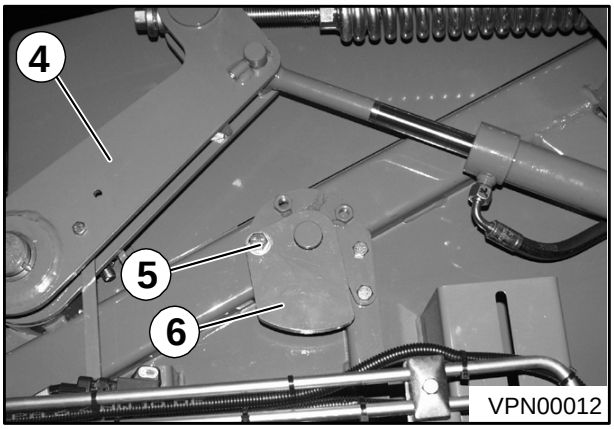


Fig. 188

To adjust the soft core, move the baling path of the front feeder rake (4) to the right and left:

- Remove the screw (5)
- Move the stop (6) one borehole to the right or left (see positions below)
- Install and tighten the screw (5)

Note

Make sure that the stop (6) on the right-hand and left-hand side of the machine is set equally.

The following positions can be set to alter the strength of the bale inner core:

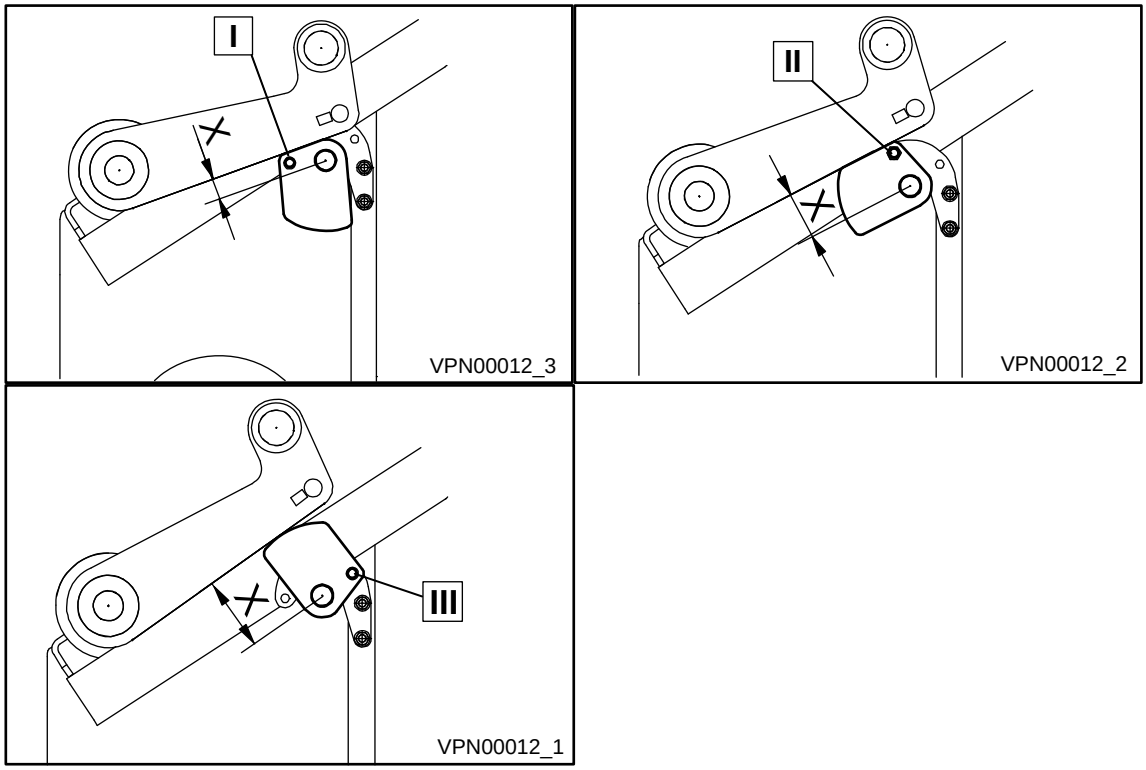


Fig. 189

Position II is recommended for baling as the machine runs at its quietest in this position and the bale start procedure is simpler.

Setting of Spring for Front Floor Conveyor Tension

The dimensions X and Z on the right-hand and left-hand side of the machine must be set to the following values:

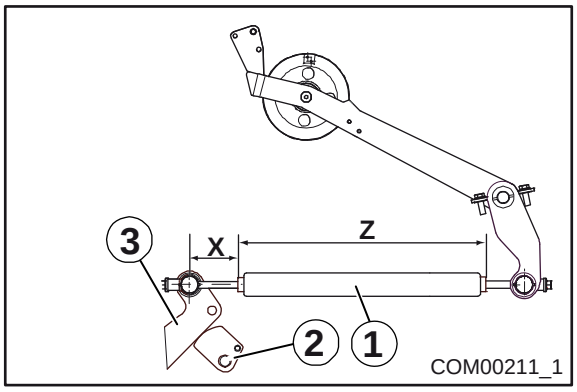


Fig. 190

Comprima CV 150 XC

X = 130 mm

Z = 690 mm

Comprima CV 210 XC

X = 115 mm

Z = 540 mm

11.17 Blockage Due to Jammed Crop

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

Comprima CF 155 XC/Comprima CV 150 XC

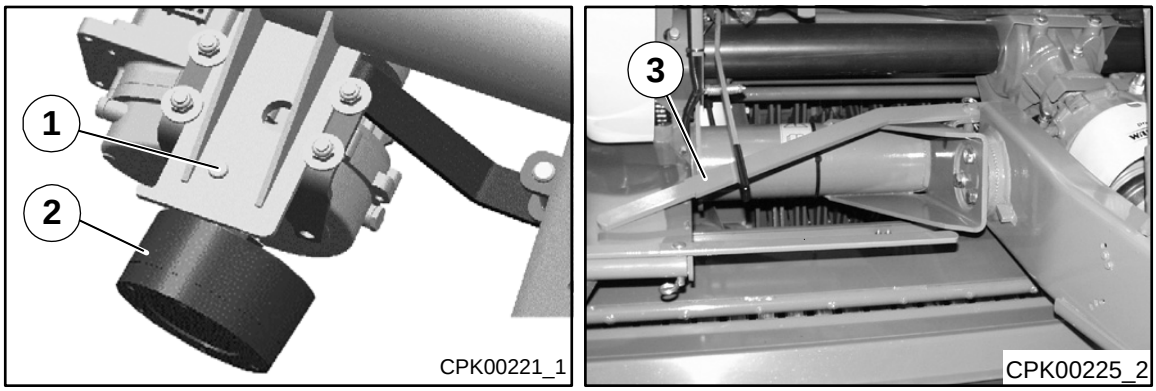


Fig. 191

Remove blockages of the machine due to jammed crop:

- To uncouple, remove the cotter pin and bolt (1) for the slip-on gear (2)
- Use a lever (3) to pull out the slip-on gear (2) and disconnect with the bolt
- Switch on tractor PTO
- Open tailgate and remove blockage
- Close tailgate again
- Switch off tractor PTO
- Insert the slip-on gear (2) again and secure with bolt and cotter pin (1)

Comprima CV 210 XC

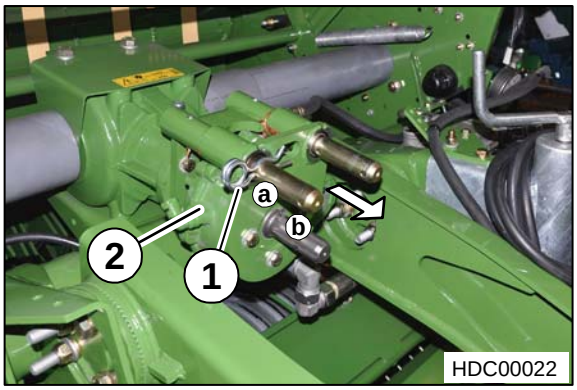


Fig. 192

Remove blockages of the machine due to jammed crop:

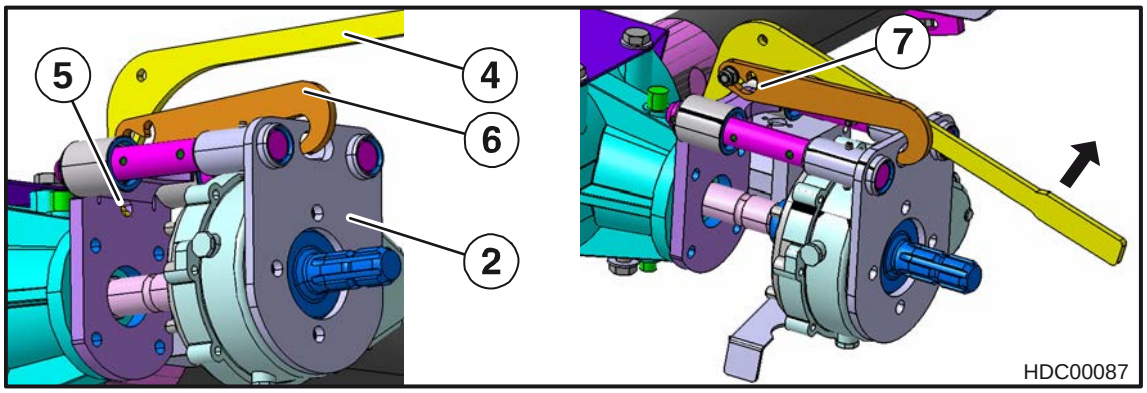


Fig. 193

- Hook hand lever (4) into the bore hole (5) and hook (6) into the oblong hole of the slip-on gear (2). The hand lever can be readjusted in the oblong hole (7) of the hook (6), if necessary.
- Push the slip-on gear (2) into position (a) by using hand lever (4) and secure with cotter pin (1).
- Remove auxiliary device and put it down in the twine box.

11.18 Bale Wrapper

11.18.1 Special Safety Instructions

DANGER! - When performing repair, maintenance or cleaning work on the machine, or in the case of technical intervention, drive elements may start moving.

Effect: Danger to life, injuries or damage to the machine.

- Switch off the engine of the tractor, remove the ignition key and carry it with you.
- Separate power supply voltage 12 volts.
- Secure machine and tractor against rolling.
- Switch off the PTO shaft and uncouple it.
- After the repair, maintenance, cleaning work or technical modifications are completed, install all protective covers and safety devices properly again.
- There is a risk of injury when working on the cutting device. Do not touch the blades of the cutting device.
- When operating the machine, ensure that nobody is within the swivel range of film wrapping arm and cutting device.

Note

Do not wrap the bale when it rains or when the crop is wet, as this could lead to forage of minor quality.

11.18.2 Components Bale Wrapper

Comprima CF 155 XC

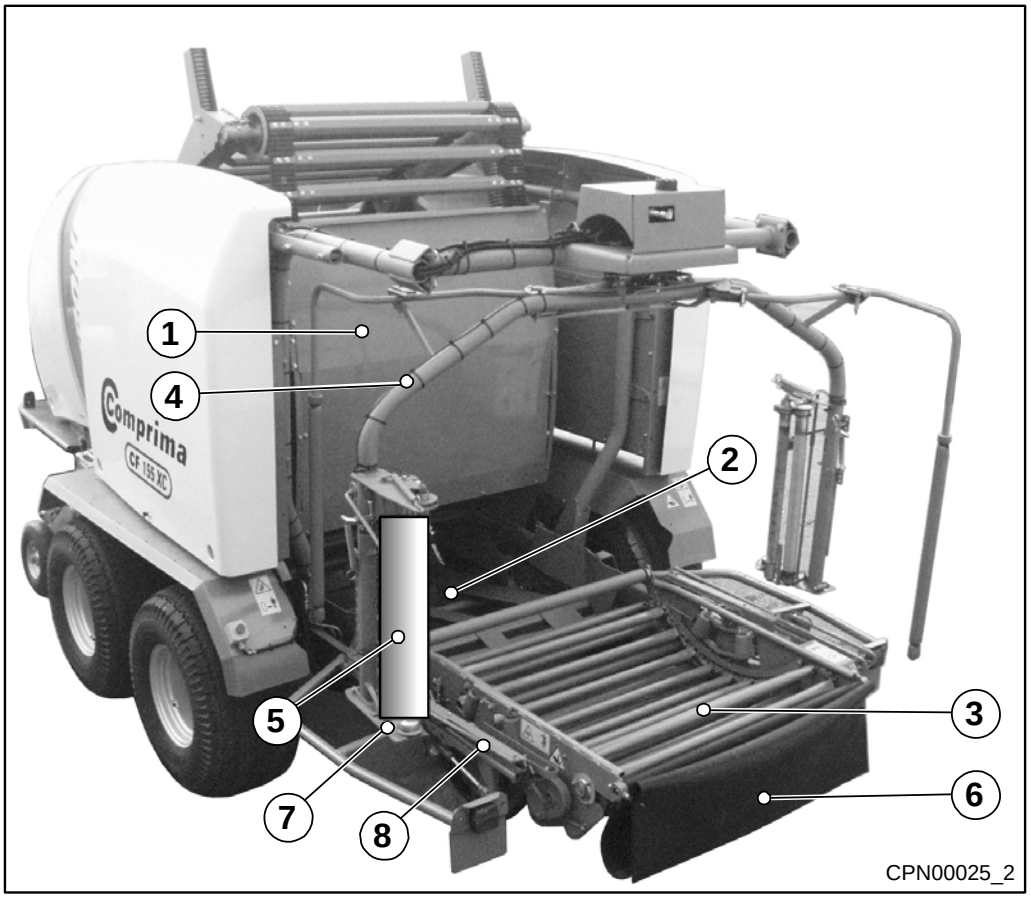


Fig. 194

1 Tailgate
2 Lifter
3 Swivel table
4 Double wrapping arm
5 Stretch sheet roll
6 Setting down bales
7 Sheet roll mounting shaft
8 Holding-down device and cutting device

Comprima CV 150 XC

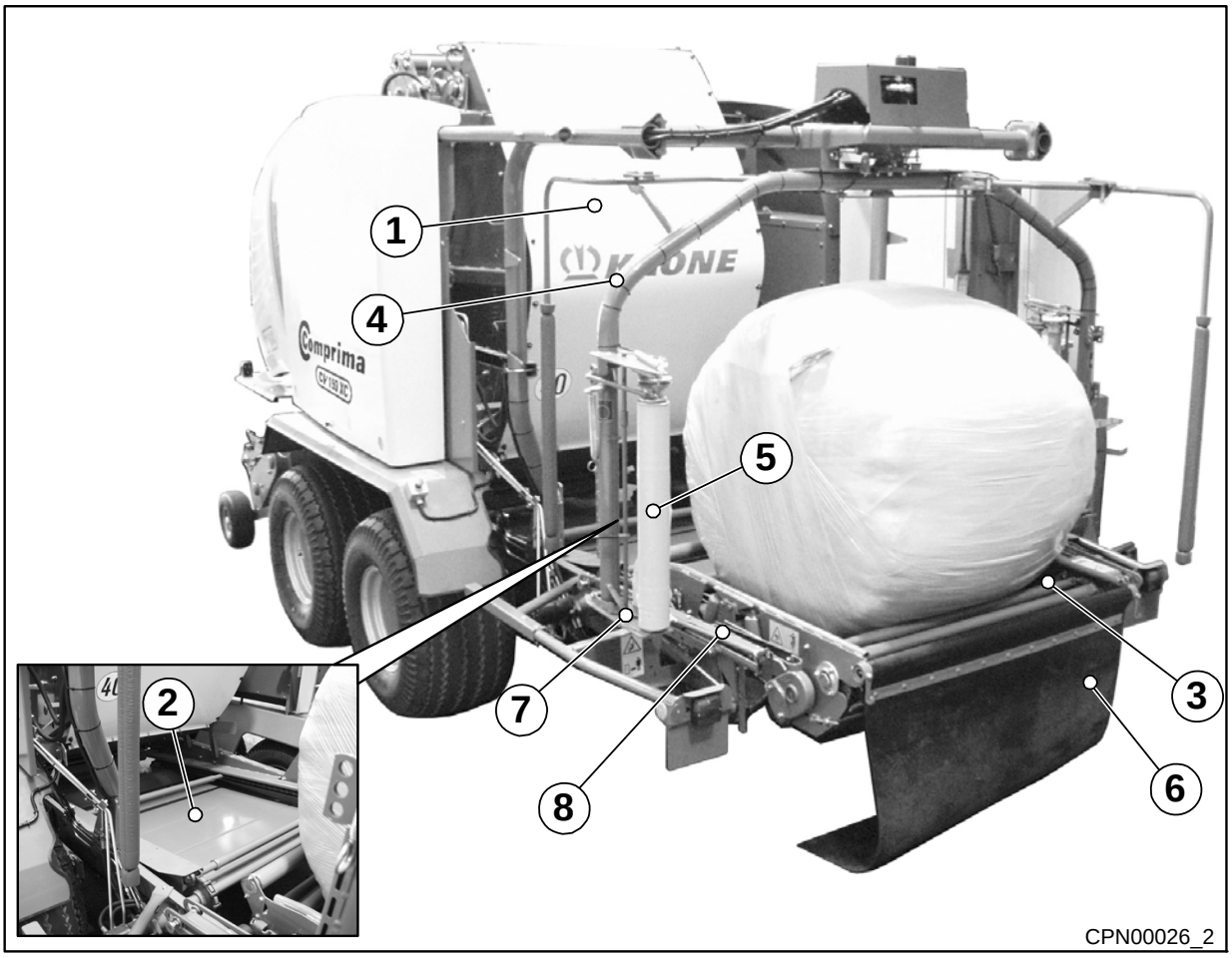


Fig. 195

1 Tailgate
2 Wrapping table
3 Swivel table
4 Double wrapping arm
5 Stretch sheet roll
6 Setting down bales
7 Sheet roll mounting shaft
8 Holding-down device and cutting device

Comprima CV 210 XC

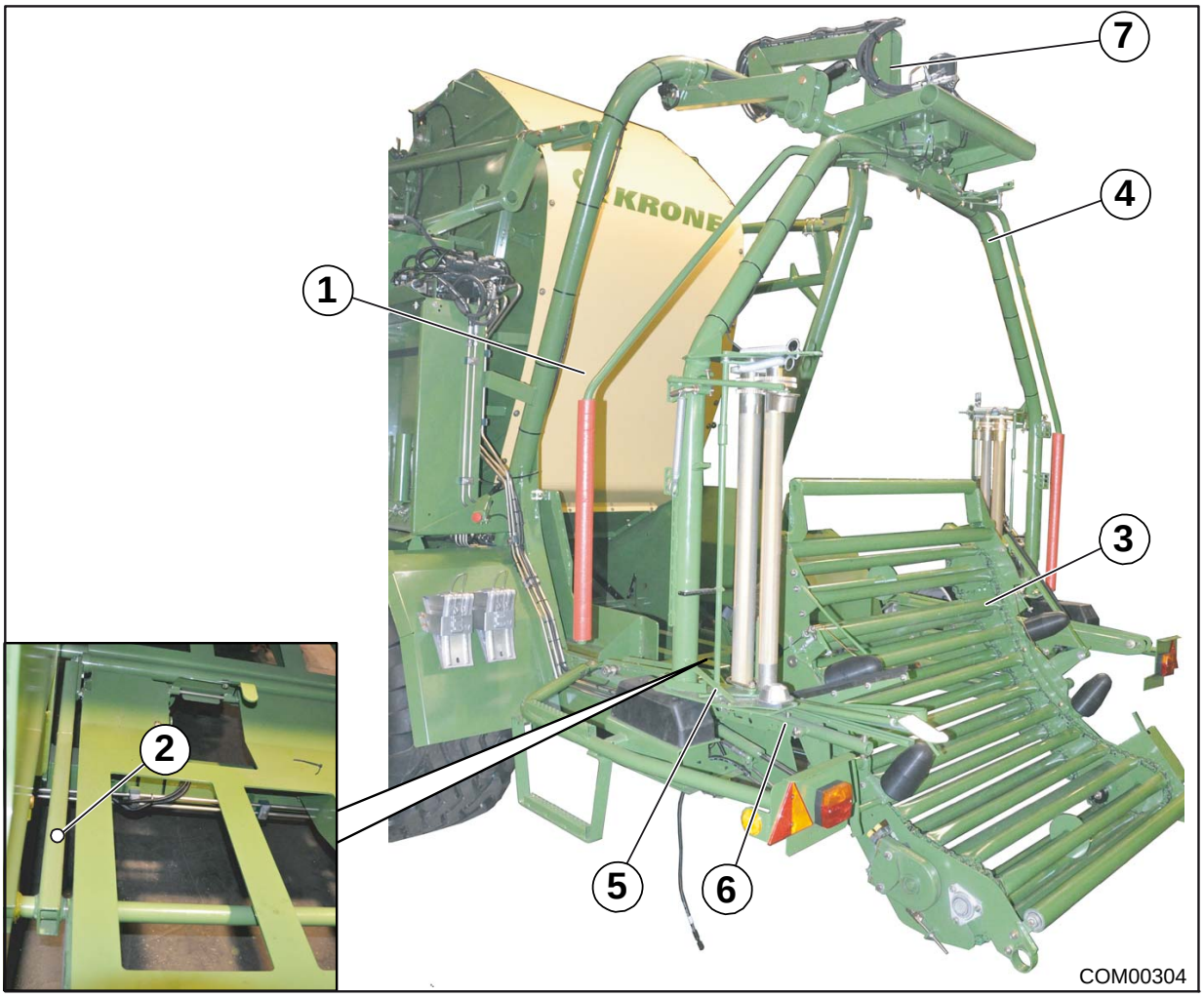


Fig. 196

1 Tailgate
2 Lifter
3 Swivel table
4 Double wrapping arm
5 Sheet roll mounting shaft
6 Holding-down device and cutting device
6 Height adjustment wrapping arm

11.18.3 Function Bale Wrapper

When the bale chamber is full, an audio signal will be heard and the drive must stop the machine. The two net guide rollers deliver the net into the bale chamber and the bale is tied.

If the net tying process is completed, the tailgate of the machine opens and the bale falls onto the lifter (Comprima CF155XC) or wrapping table (Comprima CV150XC).

Just Comprima CF155 XC

The lifter lifts the bale onto the swivel table which is fitted behind. The lifter is lowered and the tailgate closes again.

Just Comprima CV150 XC

The wrapping table transports the bale onto the swivel table which is fitted behind. The wrapping table does not move and the tailgate closes again.

The wrapping process is started in the wrapping device while a new bale is compacted in the bale chamber.

The bale rolls onto the driven swivel table while the wrapping arm circles at the same time around the bale and wraps it witch stretch sheet. After a pre-set number of wraps, this working process stops automatically.

As soon as the driver stops because the next bale has been compacted completely and imbedded the net, the swivel table inclines to the rear. The bale is set down on a rubber cover behind the machine.

Comprima CV 210 XC

When the bale chamber is full, an audio signal will be heard and the driver must stop the machine. The two net guide rollers transfer the net into the bale chamber and the bale is tied there.

The tailgate opens if the net tying process is completed. The bale is transferred from the bale chamber to the wrapping table via gravity. If necessary, the lifter activated by a sensor supports the bale transfer on slopes.

Note

The bales should not be placed down while the machine is moving as this could lead to damages of the sheet.

Note

Wrap the bale all-round with at least six layers of sheet. The overlapping of each two layers of sheet must be 50%.

11.18.4 Store Bale

Pile the bales up in that way that the face sides of the bales are located horizontally to the ground (bales are standing). Eliminate sheet damage immediately with adhesive strips. The wrapped bales must be used up to 12 months after wrapping.

Note

The storage area should not intended to be in high grass, on hedges, fences, buildings or under trees.

Compacted bales with the recommended dry matter can be piled threefoldly, while loose compacted or too moist bales cannot be piled on top of each other.

A layer consisting of water permeable material which contains no sharp objects (for example sand) serves as top layer for all stored bales. An additional safety device by protecting strips for birds or polypropylene silage nets is recommended .

Fence the bearing area in, so that it cannot be reached by cattle.

Check the bale packs regularly. Protect the bales against the infestation of bugs by using pesticides according to manufacturer’s recommendations. The applicable environment regulations must be heeded for this.

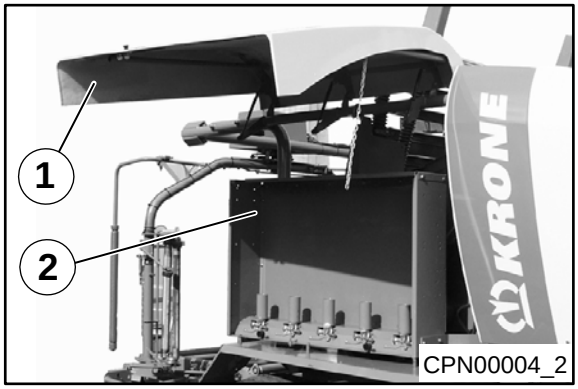
Note

Chemicals like fertilizers, herbicides, mineral oils and solvents accelerate the decomposition of the sheet. It is necessary to avoid that such chemicals soak on the sheet.

Note

We are unable to honour claims for damage due to spoiling during storage because numerous factors involved are beyond our control.

11.18.5 Inserting Sheet



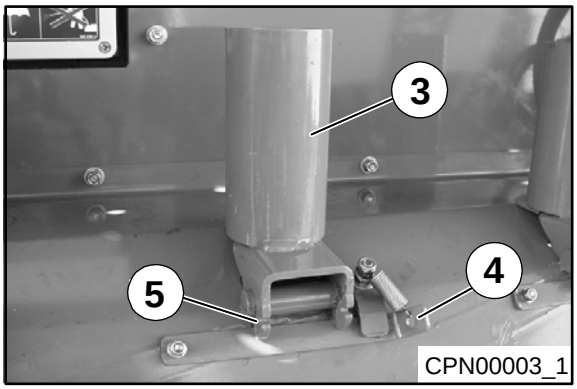
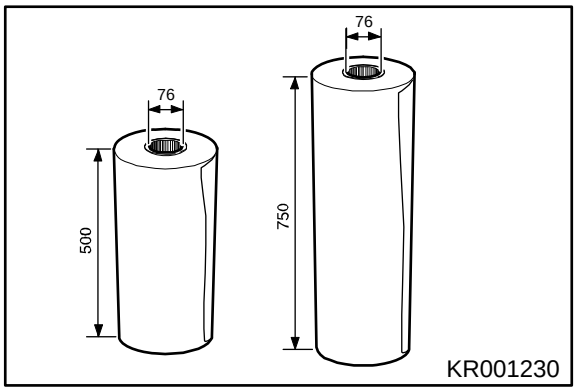


Fig. 197

Note
Up to 10 sheet rolls can be stored in both sheet boxes (2) to the right and to the left.

- Open sheet box door (1)
- For swivelling the sheet roll holder (3), loosen the locking (4) and pull the sheet roll holder forward until the indentation (5) snaps into place in the locking lever



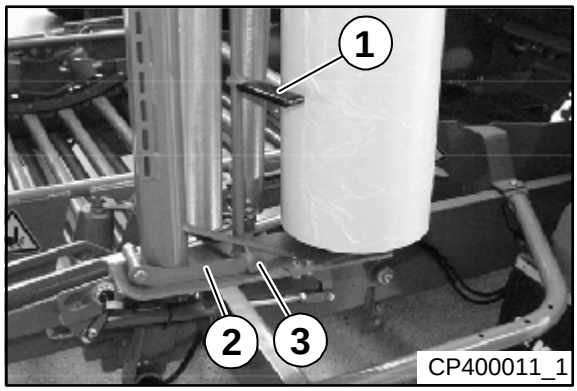


Fig. 198

Two sheet sizes can be used:

750 and 500 mm.

Sheet rolls with the following dimensions achieve the best results

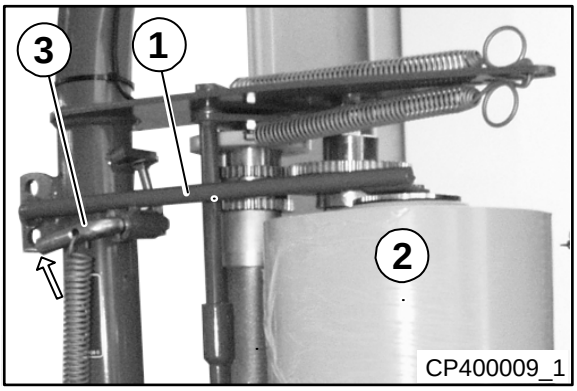
- 750 mm wide
- Core Ø 76 mm
- maximum sheet roll diameter 260 mm

We recommend using quality brands, for example DLG accepted sheets.

Note

The following worksteps must be performed on both sheet holders, as the sheet holders must always have the same setting.

- To release the tension on the section rollers, turn the lever (1) to the right until the locking lever (2) falls behind the lower guidance (3) and secures it.



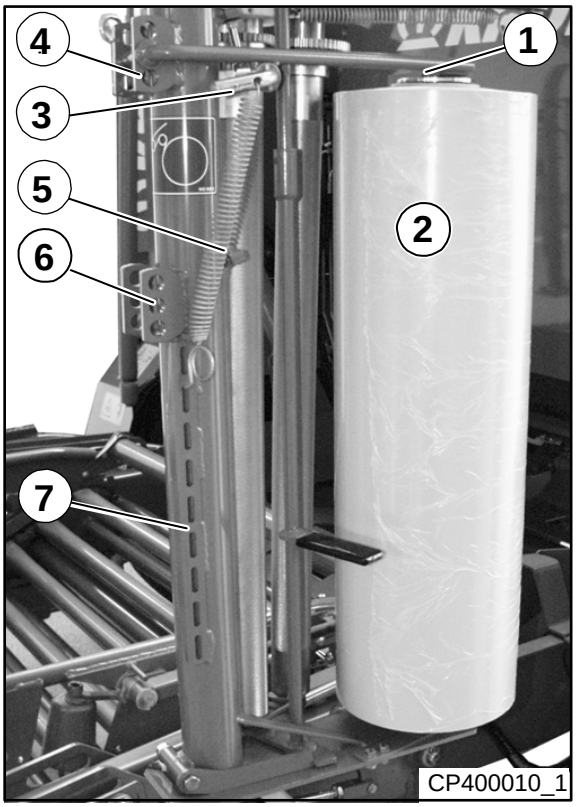


Fig. 199

Note

The sheet roll guide (1) must always run parallel to the upper end of the sheet roll (2).

Therefore the roll guide (1) must be assembled on different perforated bars depending on the size of the roll:

- Use the perforated bar (6) for small rolls
- Use the perforated bar (4) for big rolls

- When using a different size of the rolls than before, assemble the roll guide (1) onto the accordant perforated bar (refer to note above)
- Unlock the sheet roll guide (1) by activating the bolt (3) and fold it upwards.
- Insert the sheet roll (2) into the lower holder
- Insert the roll guide (1) in the sheet roll (2) by activating the bolt (3)
- Hook the tension spring (5) into the perforated bar (7) in a way that the locking screw (8) is pressed against the flat iron (9)

Note

- When using a big sheet roll (750 mm) hook the tension spring (5) into the upper area of the perforated bar (7)
- When using a small sheet roll hook the tension spring (5) into the lower area of the perforated bar (7)

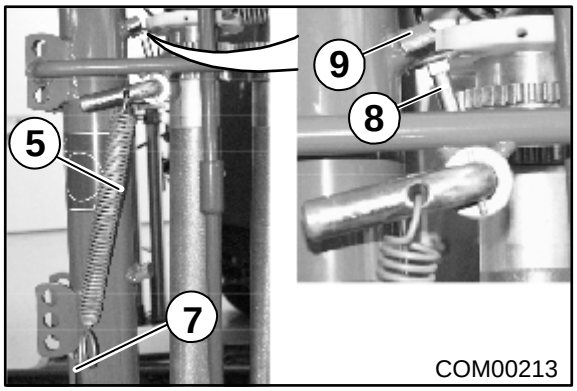


Fig. 200

DANGER! – Loss of the Sheet Roll!
Injuries or damage to the machine.
- After insertion of the sheet roll (2) secure it immediately by hooking the tension spring (5)
- Check if the locking bolt (8) is pressed tight to the flat iron (9) Only this guarantees the tight seating of the sheet roll.

After installing the sheet roll, make certain that
- the wrapping arm can rotate freely in all positions,
- the pre-stretching unit is lubricated well

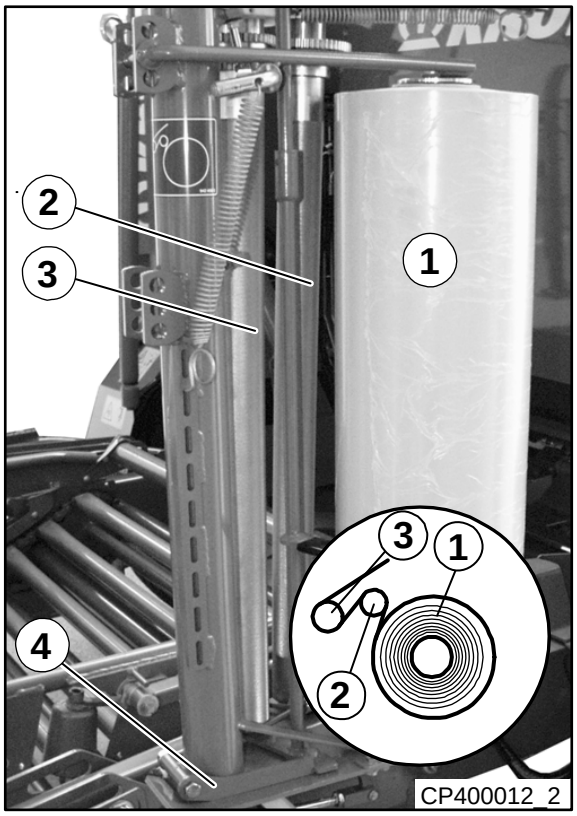


Fig. 201

WARNING! – Fingers Between the Section Rollers!

Effect: Jamming, crushing of fingers

- Do not push the fingers between the section rollers (2,3) as long as parts are moving there
- Do not push the fingers between the section rollers and the section roller mount

The following work steps must be performed on both sheet holders (both sheet holders must always have the same setting):

1. Guide the sheet of the sheet roll (1) around the forward section roller (2) to the forward section roller (3).
2. Tension the section rollers again by loosening the locking lever (4).

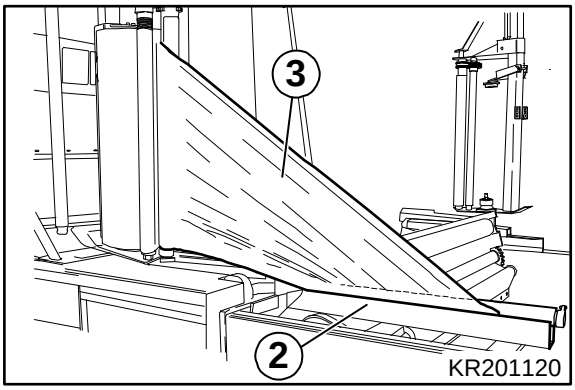


Fig. 202

Warning! – Crushing Hazard in the Sheet Clamping Device!

Effect: Jamming, crushing of fingers

- Do not work on the sheet clamping device (1) as long as parts are moving there

3. Open holding arm (2) (see Open Holding Arms / Close Holding Arms entitled in Chapter Operation Terminal).
4. Insert the starting end of the sheet in the clamping device.
5. Close the holding arm (2) (see Open / Close Holding Arms in Chapter entitled Operation Terminal).

After the first bale has been wrapped, the sheet holding arm (2) holds the sheet (3) in position.

11.18.6 Adjusting the Sheet Brake

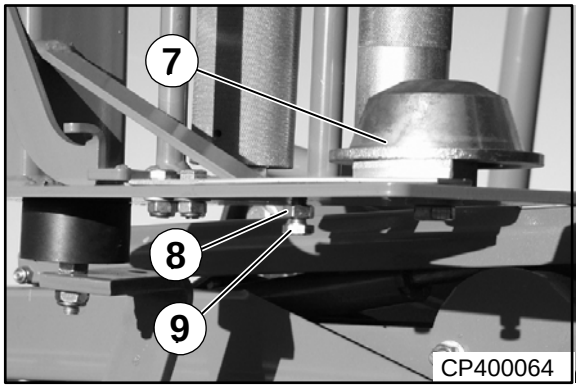


Fig. 203

The sheet brake (7) must be readjusted as follows if the sheet roll coasts down:

6. Unscrew the counter nut (8)
7. True up screw (9)
8. Tighten counter nut (8)

11.18.7 Setting the Pre-stretch of the Foil

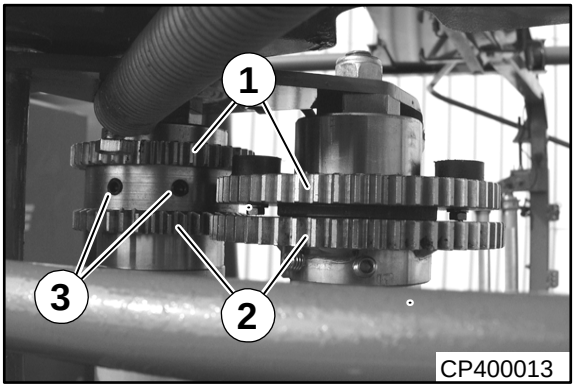


Fig. 204

The pre-stretching can be set between 50% and 70% by selecting the wheel pairs (1 or 2) on the wrapping arm.

- Upper pair of wheels (1) 50% pre-stretching
- Lower pair of wheels (2) 70% pre-stretching

The following work steps must be performed on both sheet holders (both sheet holders must always have the same setting):

1. Loosen the threaded pins (3)
2. Select the appropriate pair of wheels (1 or 2) and secure with threaded pins (3).

Check Pre-stretching

Example for a pre-stretching of 70%

- Mark the sheet on the roll with 2 lines in a distance of 10 cm
- Measure the distance between the two lines, after the sheet has been wrapped on the bale In the event of a pre-stretching of 70%, the dimension is now approx. 17 cm.

A too strong pre-stretching is probable if a considerably larger number of bales can be wrapped with a roll or if the sheet gets crosswise to small.

Note

In the event of overstretching, cancel the wrapping immediately and continuate only if the problem has been eliminated.

The width of the stretched sheet, measured on the flat end of the bale, should be at a original width of:

- 500 mm not less than 400 mm,
- 750 mm not less than 600 mm.

11.18.8 Adjusting the Gearbox on the Swivel table

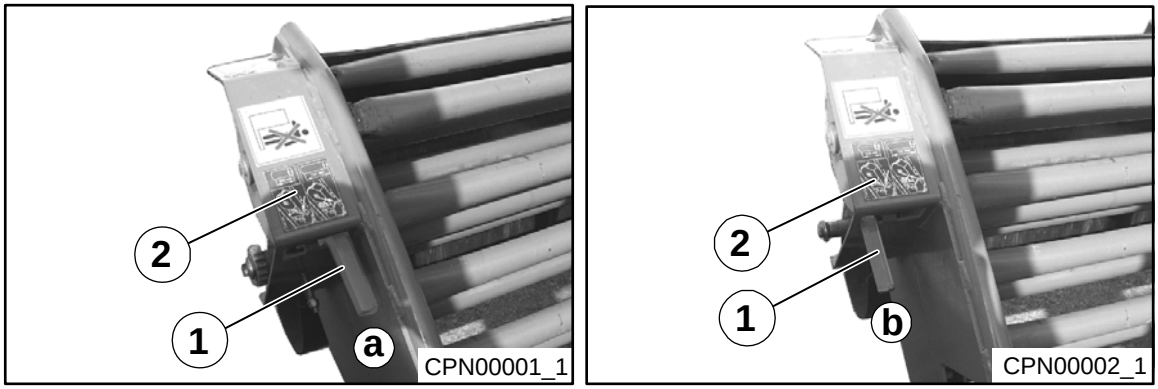


Fig. 205

Depending on which sheet roll size is used, the appropriate setting must be made on the gearbox of the swivel table.

A label is located on the gearbox of the swivel table. This label shows the control settings of the actuating lever (1) for the respective sheet roll size.

- Reverse the actuating lever (1) into the position shown on the label (2)
  - Position (a) of the actuating lever (1) corresponds to the control setting for 750 sheet
  - The position (b) of the actuating lever (1) corresponds to the control setting for 500 sheet

11.19 Removing the Crop Blockages in the Crop Collection Area

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

CAUTION! - Sharp parts
Effect: severe risk of injury
Always wear protective gloves when removing blockages.

Fig. 206

Crop blockages can occur in the following areas:
– (1) under the cutting rotor
– (2) at the pick-up.

Note
If there is a crop blockage under the cutting rotor, also check the pick-up for a possible crop blockage.

11.19.1 Crop blockage under the cutting rotor

Proceed as follows to remove the accumulated crop:

- Turn off the PTO shaft.
- Drive backwards.
- Raise the pick-up.
- Engage the PTO shaft and test whether the blockage clears while idling.

If the blockage is not removed due to this:

- Turn off the PTO shaft.
- Hydraulically lower the blade base.

If the blockage is not removed due to this:

- Also move the blades to zero position.

a) For version with manual blade control system

- Switch off the PTO shaft and the engine of the tractor.
- Remove the ignition key.
- Move the blade control shafts to the blade zero position (setting A/B: -/-) see "Changing the blade" chapter.

b) For version with hydraulic blade control system

- Turn off the PTO shaft.
- Hydraulically lower the blade base.
- Engage the PTO shaft and test whether the blockage clears while idling.

If the blockage is not removed due to this:

- Switch off the PTO shaft and the engine of the tractor.
- Remove the ignition key.

– Remove the accumulated crop manually.

If the blockage is not removed due to this:

- Start the tractor engine.
- Switch on the PTO shaft.
- Open the bale chamber using the control unit.
- Switch off the PTO shaft and the engine of the tractor.
- Remove the ignition key.

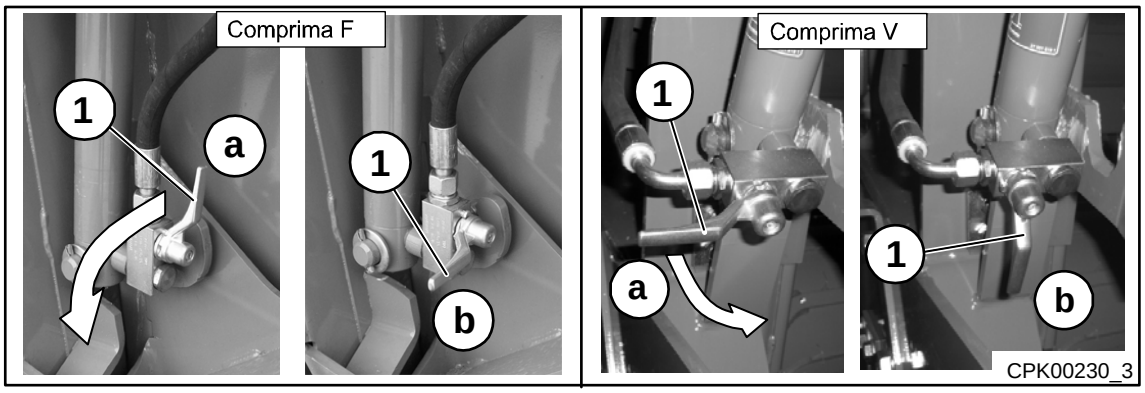


Fig.207

- Swivel the shut-off valve (1) of the left lifting cylinder from position (a) to position (b). Tailgate is locked hydraulically.

- Remove the bale from the bale chamber (roll it out to the swath, if necessary).

– Remove accumulated crop manually.

- Swivel the stop cock (1) of the left lifting cylinder from position (b) to position (a). The tailgate is unlocked hydraulically.
- Start the tractor engine.
- Switch on the PTO shaft.
- Close the bale chamber using the control unit.

11.19.2 Crop blockage at pick-up

Proceed as follows to remove the accumulated crop:

a) If crop accumulates on the right/left edge of the pick-up

- When the PTO shaft is running, drive backward. In doing so, lift/lower the pick-up several times.

If the blockage is not removed due to this:

- Switch off the PTO shaft and the engine of the tractor.
- Remove the ignition key.

– Remove the accumulated crop manually.

b) In case of a crop blockage of the pick-up

- When the PTO shaft is running, drive backward. In doing so, lift/lower the pick-up several times.

If the blockage is not removed due to this:

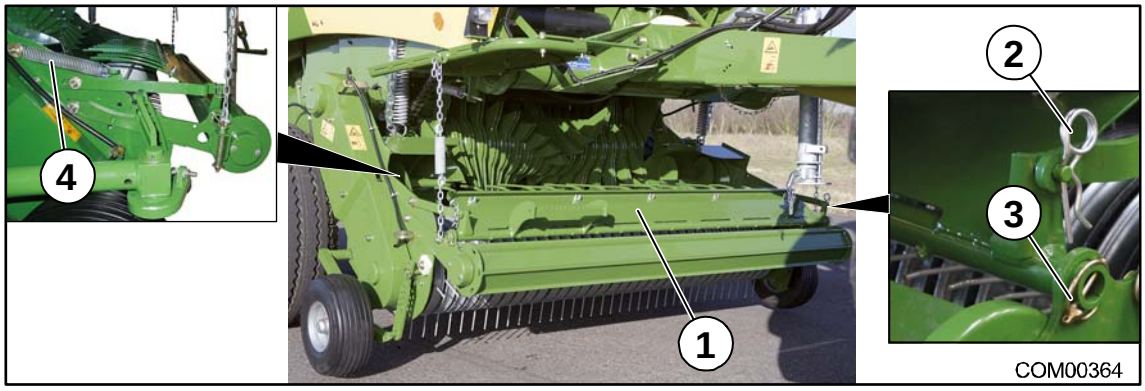


Fig. 208

- Switch off the PTO shaft and the engine of the tractor.
- Remove the ignition key.
- Dismount baffle sheet (1):
  - Loosen spring cotter pin (2) and linch pin (3) right and left.
  - Dismount spring (4).
  - Remove baffle sheet.
  - Remove accumulated crop manually.
  - Fasten baffle sheet right and left with linch pin and spring cotter pin.
  - Mount spring (4).

12 Settings

WARNING!

If the basic safety instructions are not followed, people may be seriously injured or killed.

- To avoid accidents, the basic safety instructions in the chapter Safety must have been read and followed, see chapter Safety "Basic safety instructions".

WARNING!

If the safety routines are not adhered to, people may be seriously injured or killed.

- To avoid accidents, the safety routines in the chapter Safety must be read and followed, see chapter Safety "Safety routines".

12.1 Setting the Net Brake

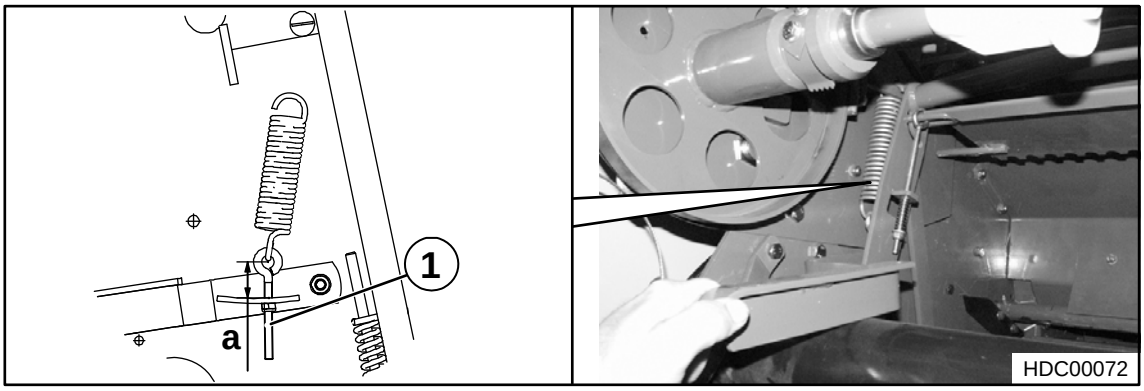


Fig. 209

- Set dimension "a" to 35 mm on the eyebolt (1) and tighten the self-locking nut.

12.1.1 Releasing the Net Brake

Note
When the brake moves down into the feed position, it should be easy to release the brake to remove the net.

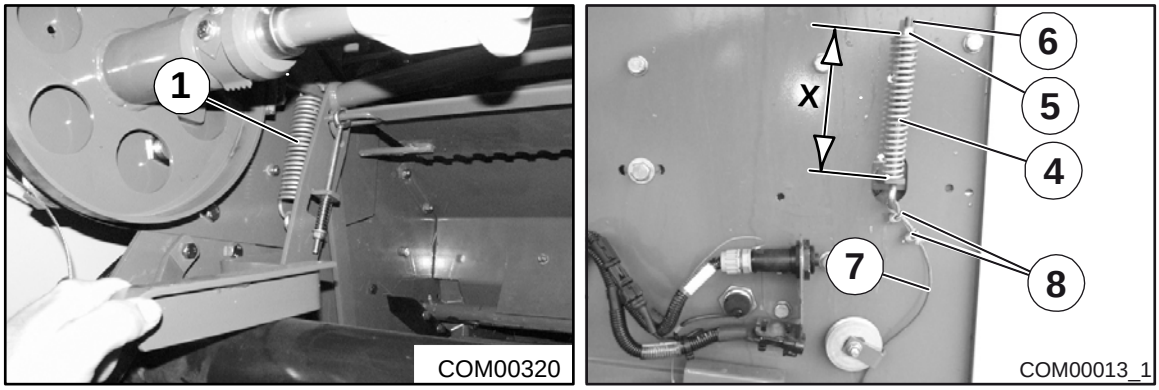


Fig. 210

Note
If the tension of the spring (4) is stronger, the net is pulled more easily. However, when starting, it pulls to the middle.
If the tension of the spring (4) is lower, pulling the net is more difficult. However, when starting, the net remains further on the outside.

If the settings on the spring (1) are changed, the spring (4) must be adjusted accordingly:

- Move the net motor to the saved feed position (refer to “Menu 3-2 “Manual Operation of the Baler” in the operation terminal).
- Install the locknut (5) flush with the end of the eye screw (6).
- Install the wire rope (7) with the wire rope clamps (8) without pressing together the springs (4).
- Tighten the locknut (5) until the spring (4) is pressed together to a dimension of X = 130 mm.

12.2 Central chain lubrication system

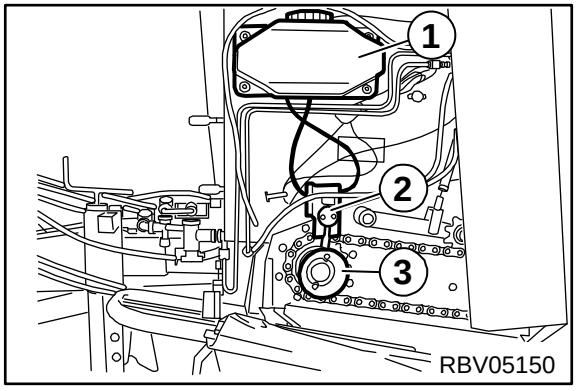


Fig. 211

The central chain lubrication system is attached to the left-hand side of the machine behind the front guard.

Each time the drive shaft makes a rotation, oil is forced out of the tank (1) via the pump (2) and the lubrication manifolds attached to the left-hand and right-hand side of the machine, and onto the brushes on the drive chains.

Different nozzles are built into the lubrication manifolds for each lubrication point.

The delivery rate can be adjusted by means of the eccentric cam (3) on the drive roller.

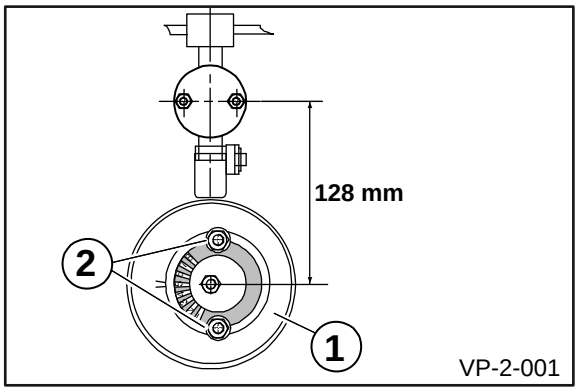


Fig. 212

- Loosen the screws (2).
- Rotate the eccentric cam disc (1).
- Retighten the screws (2).

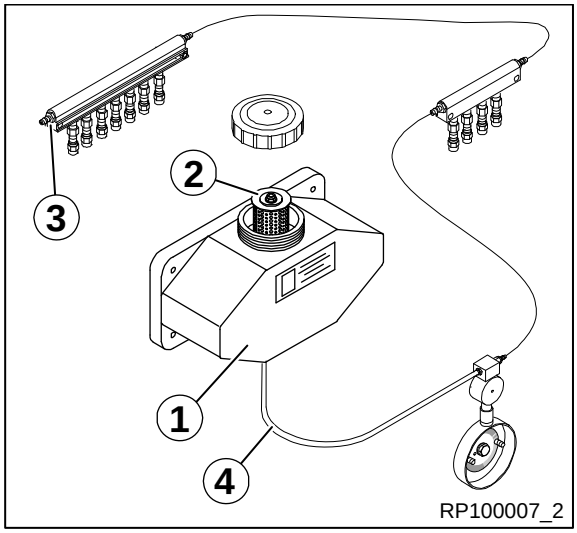


Fig. 213

Depending on consumption, check the oil supply in the container and top off if necessary.

If the lubricant container is empty, the central chain lubrication system needs to be bled:

- Top up the reservoir with oil.
- Remove the container hose (4) of the pump and wait until oil is leaking.
- Install the hose to the pump again.
- Open venting screw (3) and actuate the pump manually until oil flows without bubbles out of the valve block.

Note

Replace filter (2) once a year. First remove, empty and then thoroughly clean the tank (1). Only then replace filter (2). Do not remove filter (2) if oil is present in the filter.

Note

It must absolutely be ensured that no water or dust can enter the tank (1).

Note

Use recommended oils only!

- Different types of oil can be used.
- The viscosity should be similar to 15W40 (cold surrounding SAE 30, warm surrounding SAE 90).
- Only use biodegradable and non-toxic oils (for example Fuchs Mineral Oil Plantogear 100 - N or Castrol Optimol Optileb GT 100).
- Do not use adhesive oils for chains since these would get stuck inside the system!

Comprima CF 155 XC

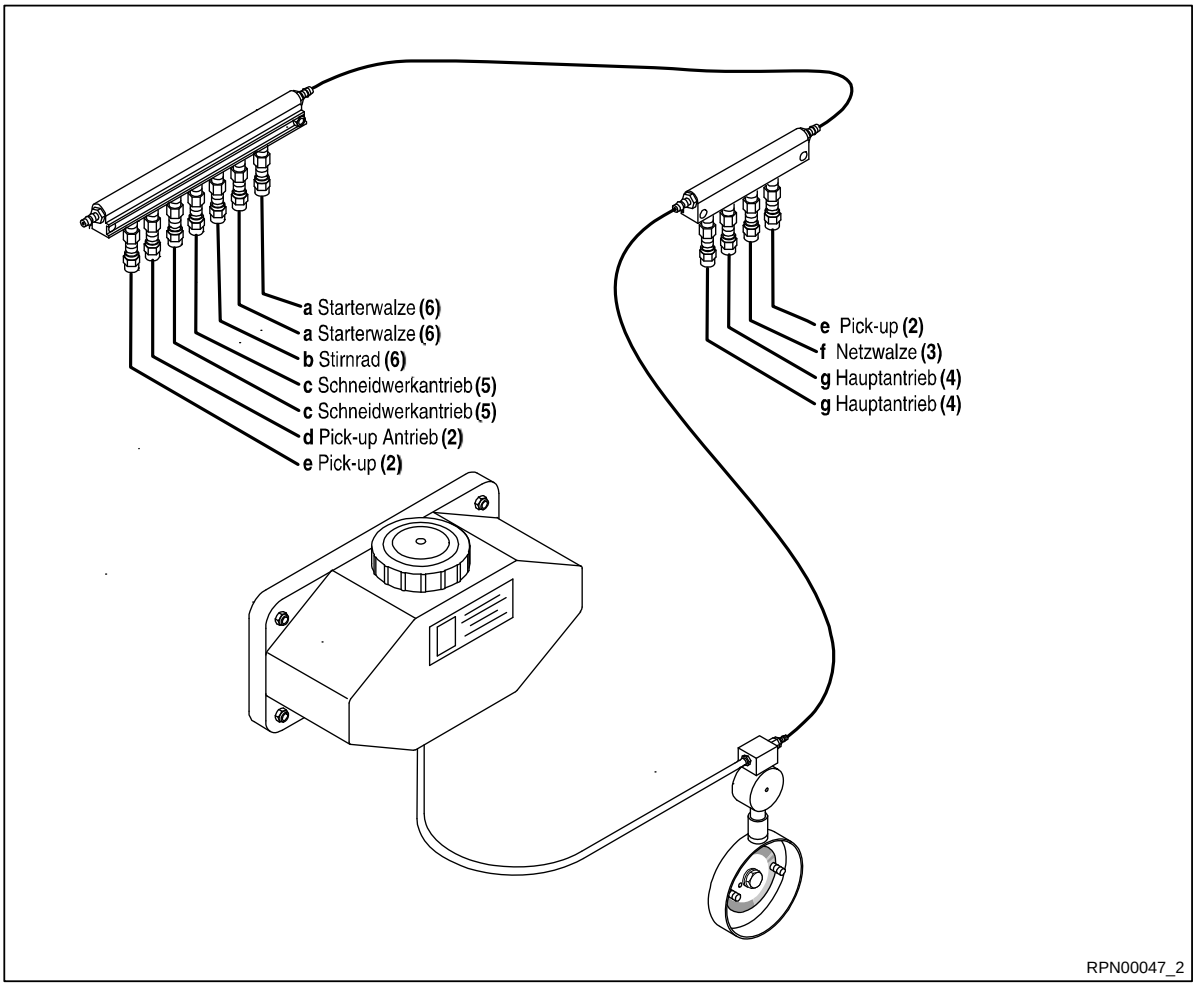


Fig. 214

a	Starter roller
b	Spur wheel
c	Cutting system drive
d	Pick-up drive
e	Pick-up
f	Net roller
g	Main drive

The figures in the brackets state the size of the nozzles for the individual lubrication points.

Note

Make certain the correct sizes are used when changing the nozzles. Each size difference doubles the oil delivery rate (MM4 deliveres for example twice as much oil as MM3).

Comprima CV 150 / CV 210 XC

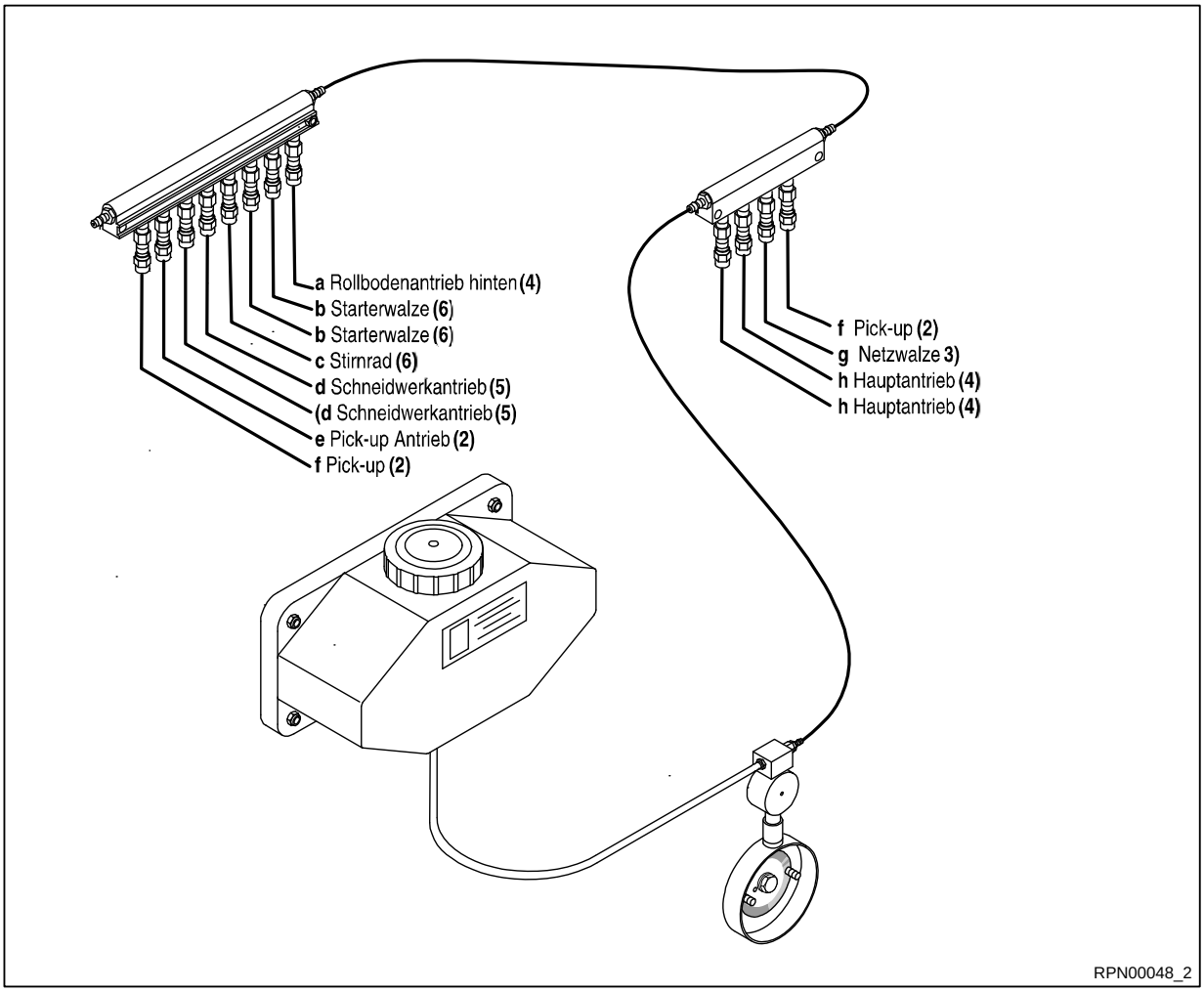


Fig. 215

a	Rear floor conveyor drive
b	Starter roller
c	Spur wheel
d	Cutting system drive
e	Pick-up drive
f	Pick-up
g	Net roller
h	Main drive

The figures in the brackets state the size of the nozzles for the individual lubrication points.

Note
Make certain the correct sizes are used when changing the nozzles. Each size difference doubles the oil delivery rate (MM4 delivers for example twice as much oil as MM3).

13 Maintenance

WARNING!

If the basic safety instructions are not followed, people may be seriously injured or killed.

- To avoid accidents, the basic safety instructions in the chapter Safety must have been read and followed, see chapter Safety "Basic safety instructions".

WARNING!

If the safety routines are not adhered to, people may be seriously injured or killed.

- To avoid accidents, the safety routines in the chapter Safety must be read and followed, see chapter Safety "Safety routines".

13.1 Spare Parts

Note

To ensure problem-free operation of the machine and to reduce wear and tear, specific maintenance and upkeep intervals must be observed. These include cleaning, greasing, lubricating and oiling parts and components.

ENVIRONMENT! - Disposal and storage of used lubricants and oil filters

Effect: Environmental damage

Store or dispose used oil and oil filters according to statutory provisions.

ENVIRONMENT! - Disposal and storage of lubricants

Effect: Environmental damage

- Store lubricants in eligible containers according to statutory provisions
- Dispose used lubricants according to statutory provisions

Warning! - Using non-approved spare parts.

Effect: Danger to life, serious injuries or loss of warranty claims as well as exclusion of liability

- Use only authentic KRONE spare parts and accessories authorised by the manufacturer. The use of spare parts, accessories or additional equipment not manufactured, tested or approved by KRONE will exclude any liability for consequential damage.

13.2 Maintenance table

Maintenance interval	Machine part	Oil change	Check	Set	Vent	Tighten
after the first 8 operating hours and every time after a wheel is changed	Wheels, wheel nuts					X
after longer downtimes	PTO shaft friction clutch				X	
after the first 500 bales, then every 3000 bales, but at least 1x per year	Screws from the floor conveyor		X			see Chapter Maintenance
when the season begins (after approx. 5 bales)	Chain tension floor conveyor drive		X	X		
	Chain tension floor conveyor		X	X		
	Chain tension pick-up drive		X	X		
	Chain tension roller drive		X	X		
	Chain tension pick-up drive		X	X		
After first use (approx. 30 - 50 operating hours), then annually after each season	Gearbox	X				
after first use und then after every 1000 bales	Floor conveyor tension		X	X		

13.3 Setting of the Scraper Rail to the Upper Spiral Roller

- Open tailgate.

WARNING! – Settings on the machine!
Danger to life or serious injuries.
- The shut-off valve on the left hydraulic cylinder must be closed.

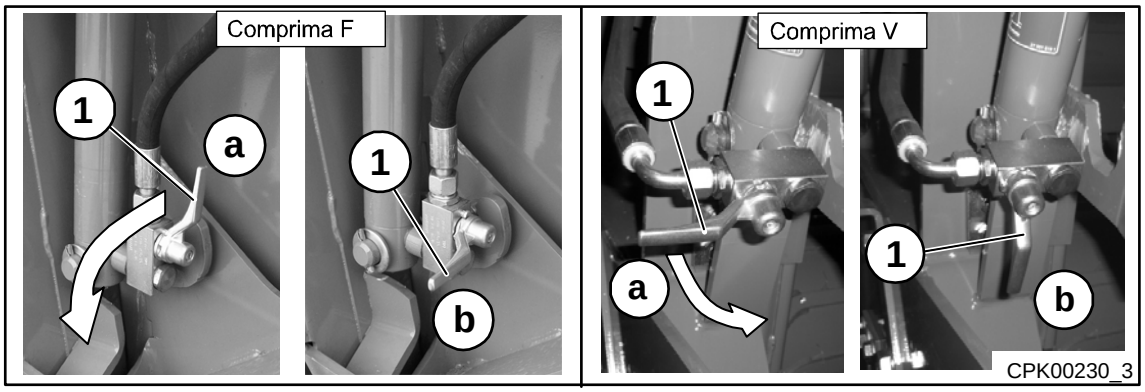


Fig. 216

- Swivel shut-off valve (1) in the return of the left lifting cylinder from position (a) to position (b), the tailgate is locked hydraulically.

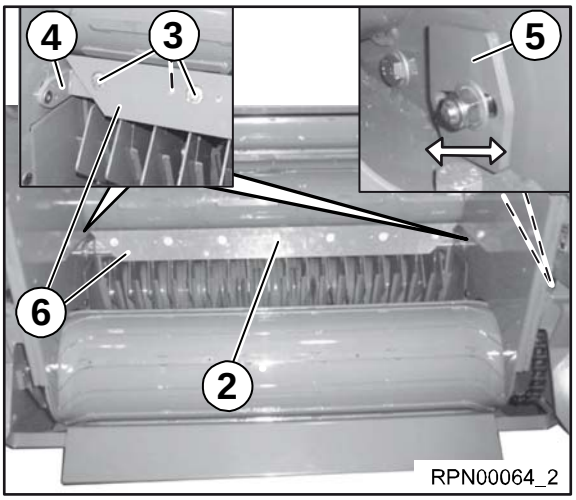


Fig. 217

- Install the scraper bar (4) so it is centred in the oblong hole of the side part and slightly tighten the screws.
- Drive the clamping wedge (5) tightly into place and tighten the screws securely.
- Move the scraper rail (6) up against the spiral roller (2).
- Then tighten the hexagonal head screws (3) and threaded rods.
- After the setting is made, run the machine manually and check whether the scraper rail (6) comes in contact with the spiral roller (2).
- If the scraper rail (6) does not rest on the spiral roller (2), the screw connection on the clamping wedge (5) must be loosened.
- Turn the clamping wedge (5) by 180 degrees and retighten the screw connection (the dimensions of the clamping wedge of the oblong hole to the upper and lower stop edge are different).

13.4 Position of the Sensors

Right-hand Side of the Machine

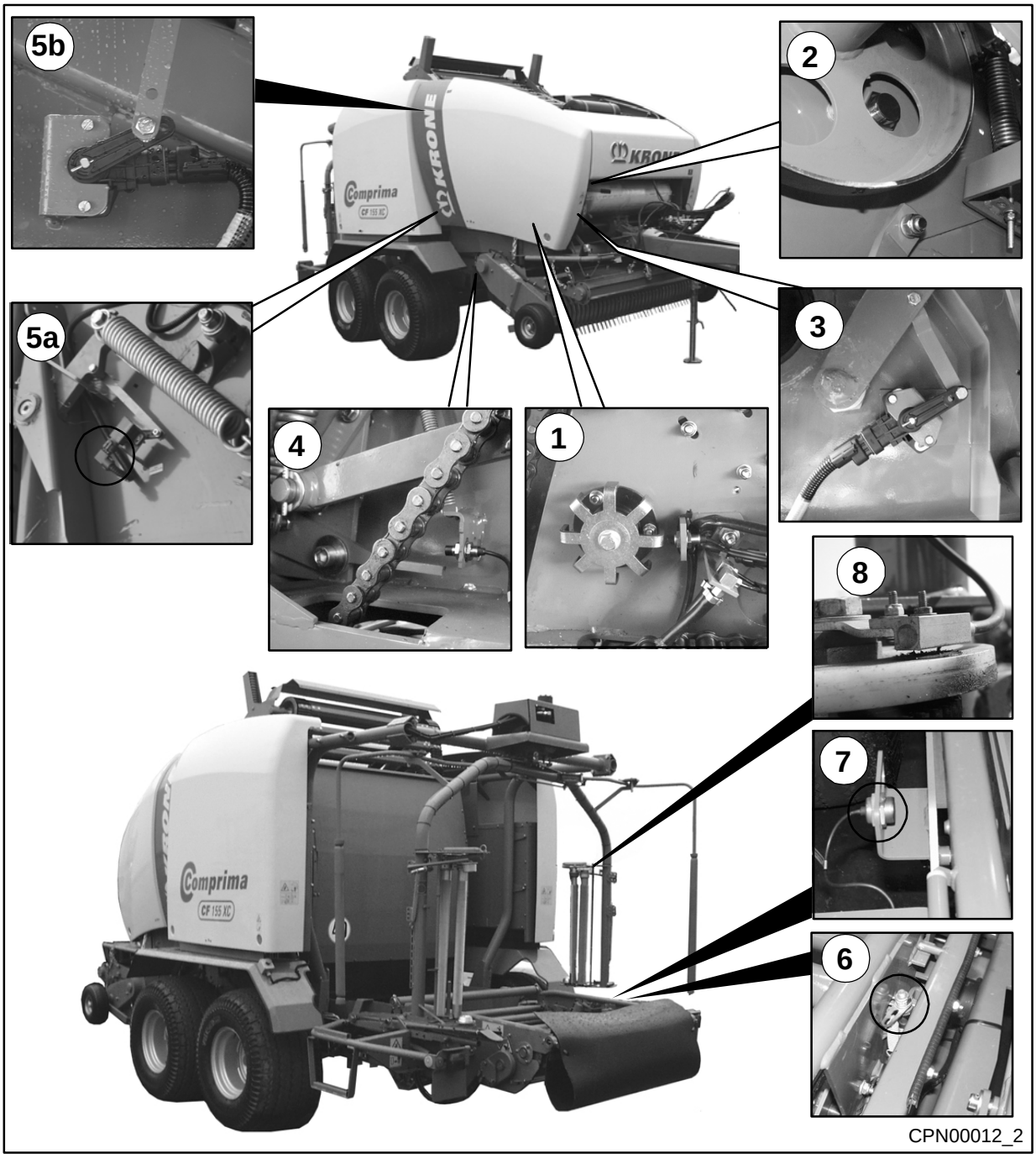


Fig. 218

Pos.	Sensor designation	Distance Transmitter/sensor	Operating terminal CCI	Sensor type	Starting torque
1	Net length (B1)	2 mm	X	Namur	10 Nm
2	Net running (B2)	2 mm	X	Namur	10 Nm
3	Position of net motor (B3)		X	Rotation pulse encoder	
4	Bale chamber closed right (B12)	2 mm	X	Namur	10 Nm
5a	Bale firmness right (B10) (CF155XC)		X	Rotation pulse encoder	
5b	Bale diameter right (B10) (CV150XC)		X	Rotation pulse encoder	
6	Bale on swivel table right (B17)		X	Namur	10 Nm
7	Holding arm right (B23)	4 mm	X	Namur	10 Nm
8	Sheet tear control (B24)				

Left-hand Side of the Machine

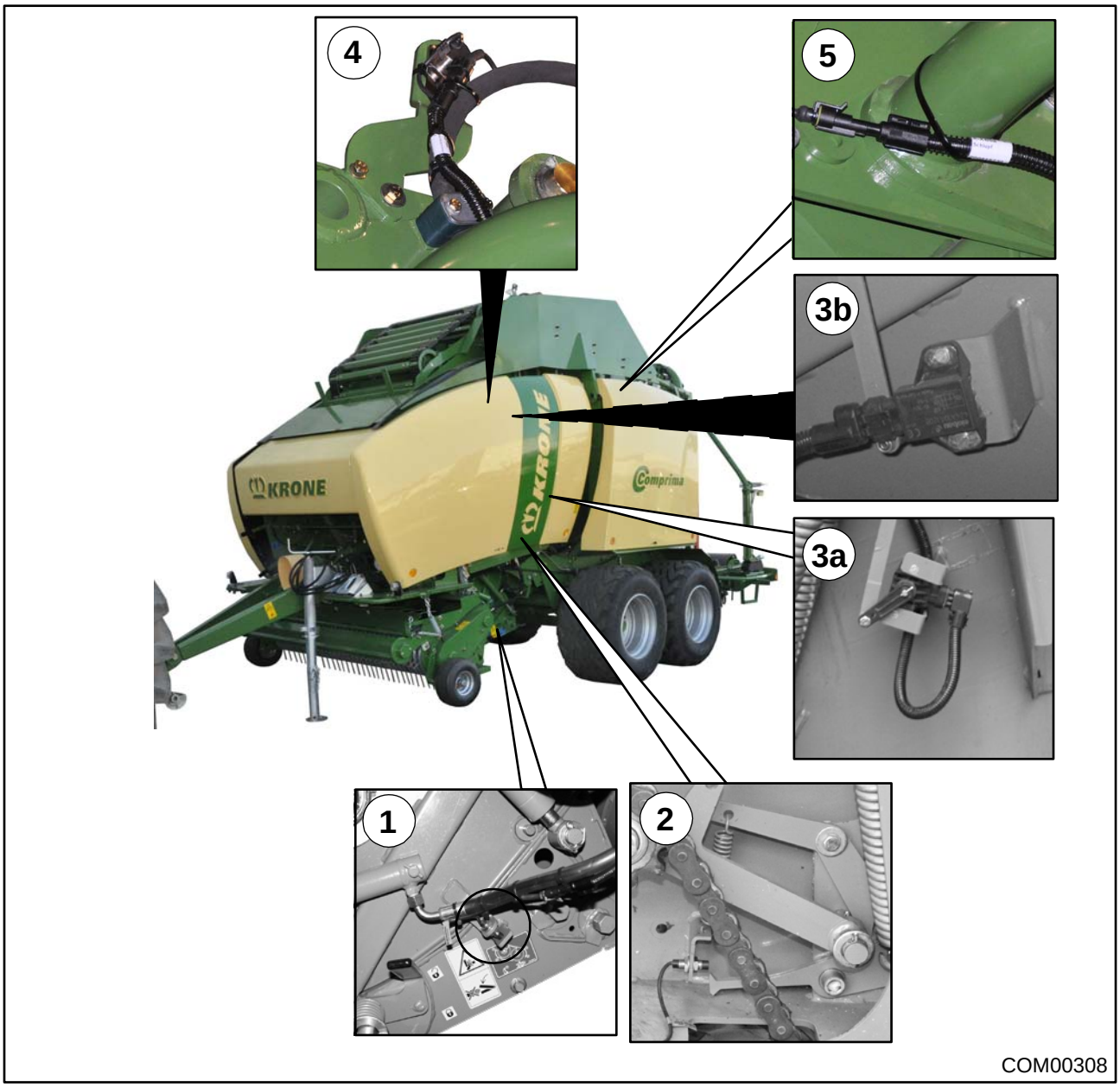


Fig. 219

Pos.	Sensor designation	Distance Transmitter/ sensor	Operating terminal CCI	Sensor type	Tightening torque
1	Position of cutter base (B8)	2 mm	X	Namur	10 Nm
2	Bale chamber closed left (B11)	2 mm	X	Namur	10 Nm
3a	Bale firmness left (B9) (CF155 XC)		X	Rotary potentiometer	
3b	Bale diameter left (B9) (CV150 XC /CV210 XC)		X	Rotary potentiometer	
4	Bale chamber open (B14)	4 mm	X	Namur	10 Nm
5	Slip sensor (B5)	2 mm	X	Namur	10 Nm

Rear Side of Machine

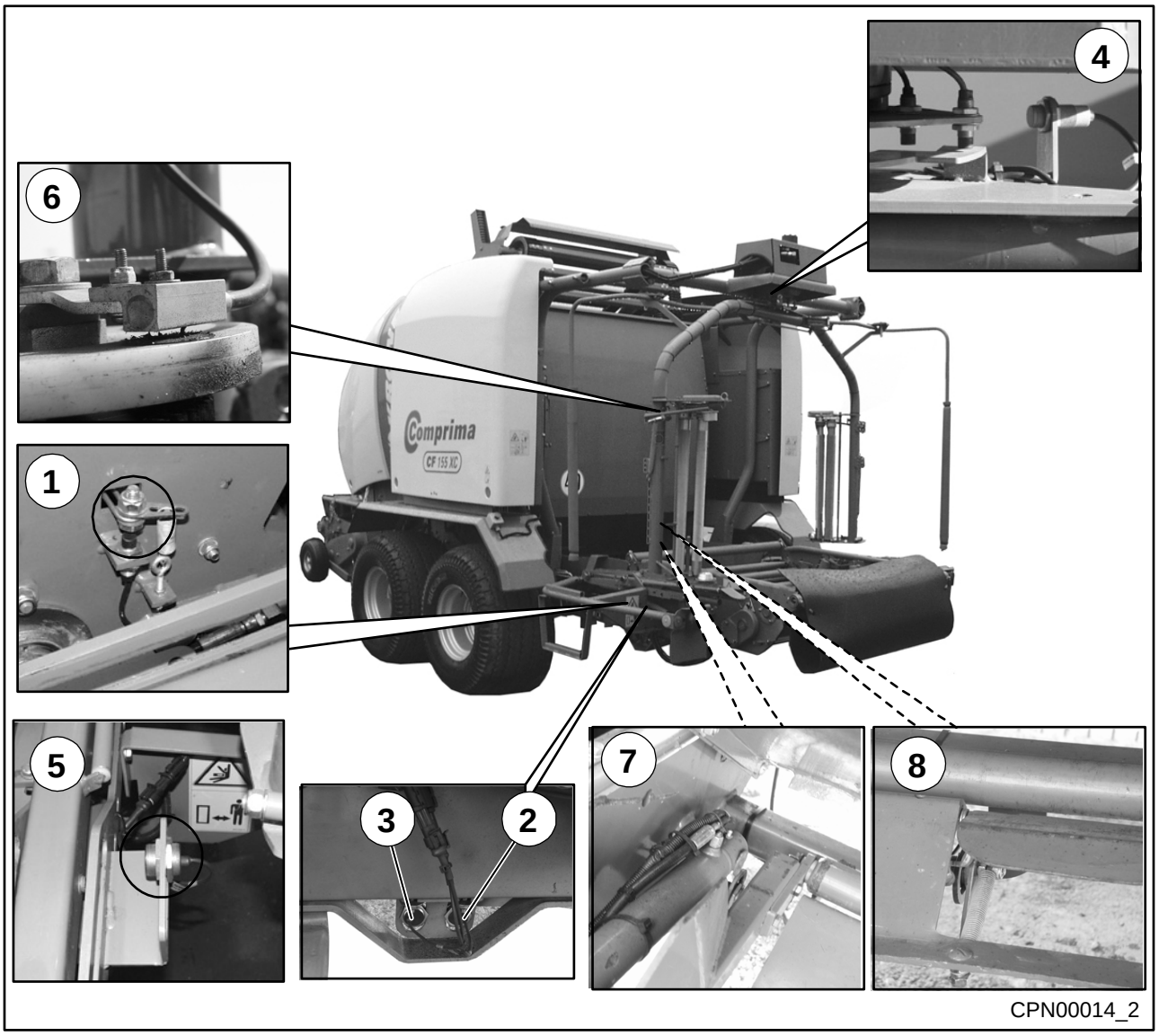


Fig. 220

Pos.	Sensor designation	Distance Transmitter-Sensor	Operating terminal CCI	Sensor type	Tightening torque
1	Bale on swivel table left (B16)	2 mm	X	Namur	10 Nm
2	Swivel table centre (B18)	4 mm	X	Namur	10 Nm
3	Swivel table front (B19)	4 mm	X	Namur	10 Nm
4	Position of the wrapping arm / zero position (B21/B20)	2 mm	X	Namur	10 Nm
5a	Holding arm left (B22)	4 mm	X	Namur	10 Nm
6	Sheet tear control (B24)				
7	Lifter front (CF155 XC)	4 mm	X	Namur	10 Nm
8	Bale on lifter (CF155 XC)	4 mm	X	Namur	10 Nm

13.4.1 Adjusting the Sensors

13.4.1.1 Namur sensor d = 12 mm

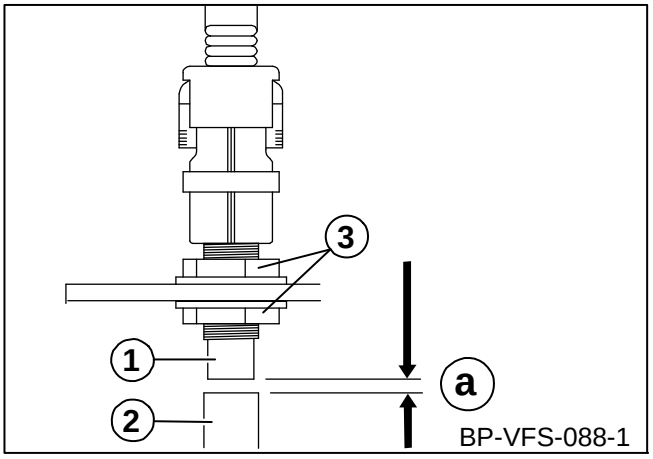


Figure 221

The dimension between the encoder (2) and the sensor (1) must be "a" = 2 mm .

Setting

- Loosen the nuts on either side of the sensor.
- Turn the nuts until dimension "a" = 2 mm is reached.
- Tighten the nuts again.

13.4.1.2 Namur Sensor d = 30 mm

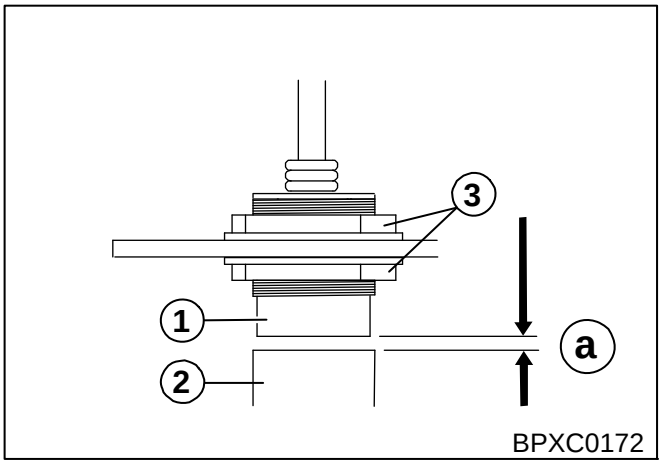


Fig. 222

The dimension between the encoder (2) and the sensor (1) must be "a" = 4 mm .

Note

The dimension must be set to 2 mm for sensor “Net runs” (B2).

Setting:

- Loosen the nuts on both sides of the sensor.
- Turn the nuts until dimension "a" = 4 mm is reached.
- Tighten the nuts again.

13.4.1.3 Sensor Position Cutter base (B8)

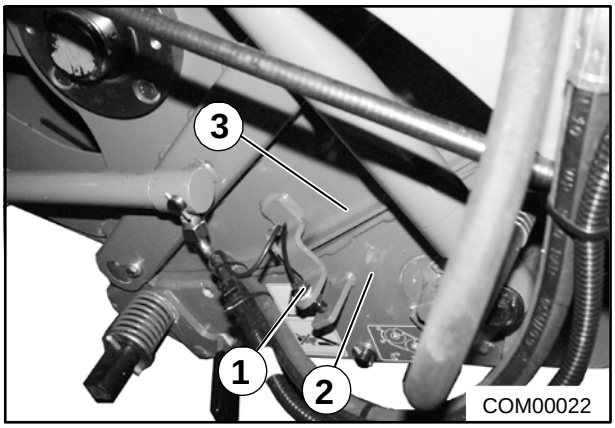


Fig. 223

CAUTION!

Damages to the machine.

- When setting the sensor (1) for the position of the cutter base, the cutter drawer (2) must rest closely against the cutting system housing (3). Therefore, existent soiling in this area needs to be removed before the setting.

13.4.2 Checking and Setting Axial Play of the Net Brake

CAUTION!

Damage to sensor B2

- Before setting the sensor B2 (net runs), the axial play of the net brake must be checked and set, if necessary.

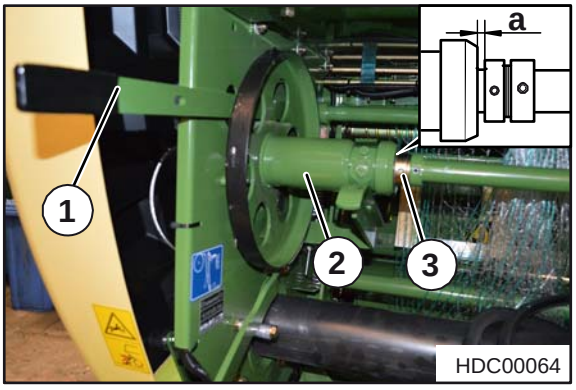


Fig. 224

Checking Axial Play:

- To release the net brake (2), press the lever (1) downwards.
- Determine the play (a) of the net brake (2) to the adjusting ring (3) by pushing forward and pushing backward the net brake (2) (visual inspection). The axial play (a) must be 1-2 mm.

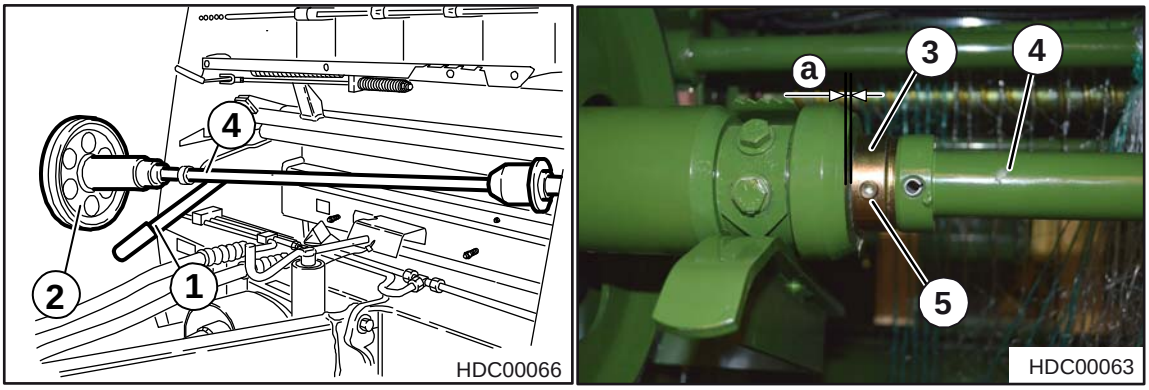


Fig. 225

Set the axial play if the distance (a) is larger than 2 mm:

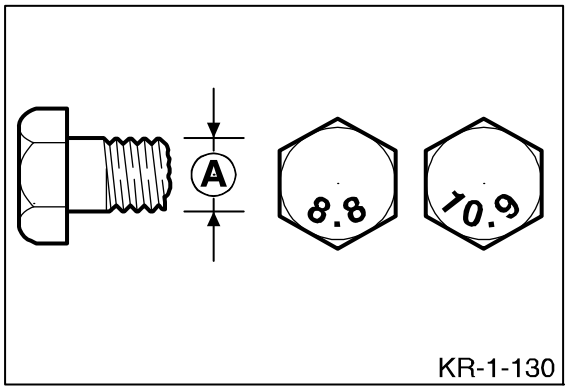
- Lift lever (1).
- Swivel the net brake (2) with the net roll mounting shaft (4) to the front and remove the net brake (2).
- Unscrew the threaded pin (5) out of the adjusting ring (3) and remove it.
- Slide the shim rings on the net roll mounting shaft (4) and install the adjusting ring (3) with the threaded pin (5) on the net roll mounting shaft (4).
- Slide the net brake (2) on the net roll mounting shaft (4) and swivel it back into the machine.

13.5 Tightening torques

Tightening torque M_A in Nm (unless otherwise indicated).

A Ø	5.6	6.8	8.8	10.9	12.9
	M_A (Nm)				
M 4		2.2	3	4.4	5.1
M 5		4.5	5.9	8.7	10
M 6		7.6	10	15	18
M 8		18	25	36	43
M 10	29	37	49	72	84
M12	42	64	85	125	145
M14		100	135	200	235
M14x1.5			145	215	255
M 16		160	210	310	365
M16x1.5			225	330	390
M 20			425	610	710
M 24			730	1050	1220
M 24x1.5	350				
M 24x2			800	1150	1350
M 27			1100	1550	1800
M 27x2			1150	1650	1950
M30			1450	2100	2450

A = Thread size
(the stability class can be seen on the head of the screw).



NOTE

The table above does not apply to countersunk screws with hexagonal socket in case the countersunk screw is tightened via hexagonal socket.

Note

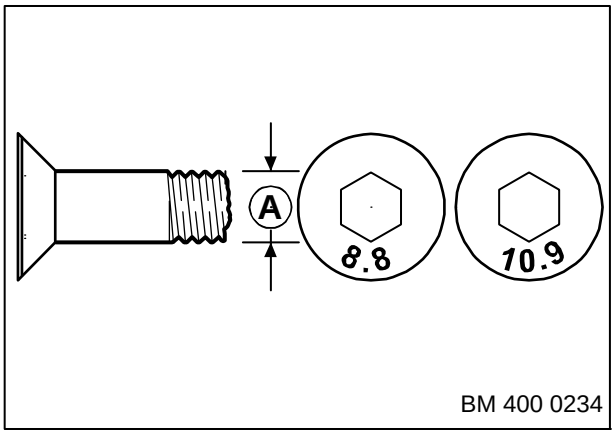
Regularly check that nuts and bolts are tightly in place (approx. every 50 hours) and tighten them if necessary.

13.6 Tightening torques (countersunk screws)

Tightening torque M_A in Nm (unless otherwise indicated).

A Ø	5.6	8.8	10.9	12.9
	M_A (Nm)			
M 4		2.5	3.5	4.1
M 5		4.7	7	8
M 6		8	12	15
M 8		20	29	35
M 10	23	39	58	67
M 12	34	68	100	116
M 14		108	160	188
M 16		168	248	292
M 20		340	488	568

A = thread size
(the stability class can be seen on the head of the screw).



NOTE
The table above does not apply to countersunk screws with hexagonal socket and metric thread which are tightened via hexagonal socket.

Note
Regularly check that nuts and bolts are tightly in place (approx. every 50 hours) and tighten them if necessary.

13.7 Tandem Axle

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

Comprima CF 155 XC/Comprima CV 150 XC

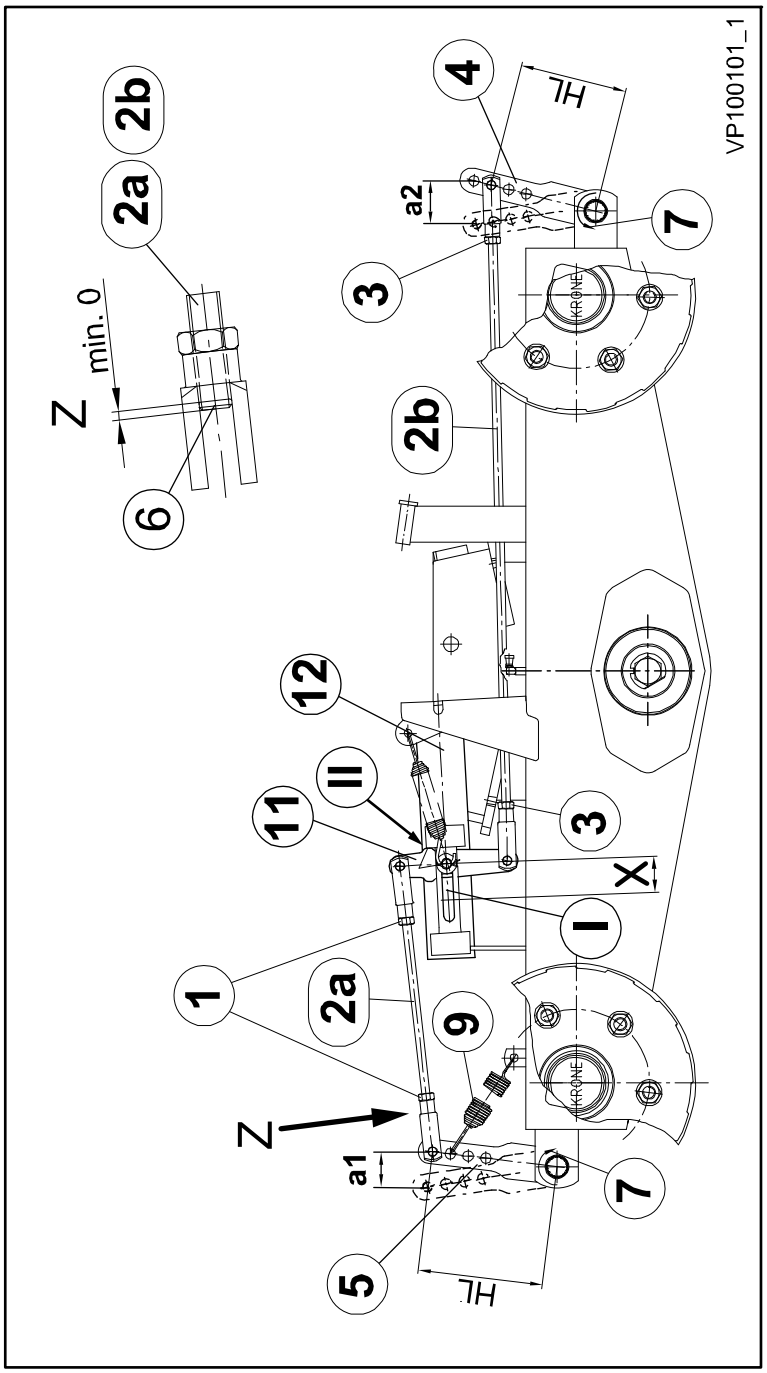


Fig. 226

Note

The brake activation has been adjusted in the factory.

The brake must be readjusted:

- if the braking effect diminishes (for example due to wear on the brake shoes)
- if the activation path of the brake cylinder "X" is greater than 50 mm.

Readjusting Brake Linkage

Note
Each time before the brake linkage (2a, 2b) is readjusted, the thickness of the lining on the brake shoes must be checked. The thickness of the lining must still be at least 2 mm.

1. Disconnect the brake linkage (2b) from the brake lever (4)
2. Loosen the counter nuts (1) on the brake linkage (2a)
3. Turn the brake linkage (2a) until the brake lever path a1 is about 30 mm on activation

Note
The compensation lever (11) must be flush both in the oblong hole (I), and in the upper part (II) of the support (12) for all settings.

4. Disconnect the brake linkage (2a) from the brake lever (5)
5. Then mount the brake linkage (2b) on the brake lever (4) again (note the length of the brake lever (RL))
6. Loosen the counter nuts (3) on the brake linkage (2b)
7. Turn the brake linkage (2b) until the brake lever path a2 is about 30 mm on activation
8. Then mount the brake linkage (2a) on the brake lever (5) again (Observe the brake lever length (RL))
9. Activate the brake. To do so, the cylinder stroke X must be between 25 mm and 50 mm

Note
If the cylinder stroke X is too great, readjust the brake linkage (2a, 2b) (increase the length of the brake linkage).

After the brake linkage (2a, 2b) has been readjusted, check whether

- the wheels turn freely when the brake is released. If they do not, the brake linkage (2a, 2b) must be readjusted (shorten the brake linkage),
- the threading overhang (6) of the brake linkage (2a, 2b) on the clevises must be min.=0 mm.
  If the threading overhang (6) (min. = 0 mm) cannot be reached, the brake lever (4, 5) should be moved on the brake shafts against the operating direction (7).

10. Tighten counter nuts (1,3) on the brake linkages (2a,2b).

Note
Before placing the brake into service again, check the safety equipment for functionality.

Comprima CV 210 XC

After the first few kilometres of driving, the transfer mechanisms and the brake linings of the brake drum will have adjusted. The play resulting from this must be compensated for.

13.7.1 Setting of the Brakes with Hydraulic Linkage Setter

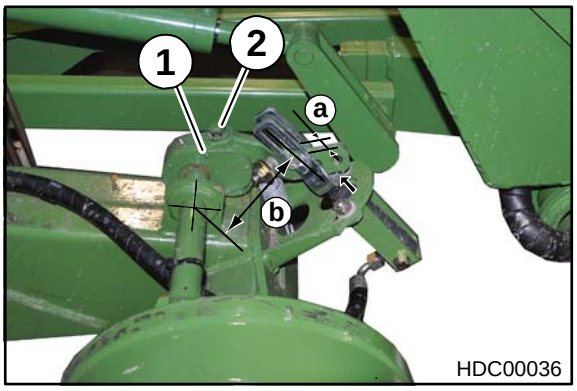


Fig. 227

- Check the linkage setter (1) every 200 operating hours.
- Activate the linkage setter (1) manually in the pressure direction. If the clear path (a) is max. 35mm, the setting of the linkage setter (1) must be modified.

- Readjust the linkage setter (1) by using an adjusting screw (2).
- Set the clear path (a) to 10 - 12 % of the connected brake lever length (b).
  Example:
  In case of a lever length of b = 125 mm, the clear path must be 12 - 15 mm.

13.8 Tyres

Warning! - Tyre fitting incorrect

Effect: Injuries or damage to the machine

- Fitting tyres requires sufficient knowledge and the availability of proper tools!
- If tyres are not correctly fitted, it could explode when pumped up. This can cause serious injury. If you do not have sufficient experience of fitting tyres, have tyres fitted by the KRONE dealer or a qualified tyre specialist.
- When fitting tyres on the wheel rims, the maximum pressure given by the tyre manufacturer must not be exceeded. The tyre or even the wheel rim could explode and/or burst.
- If the tyre heels do not fit properly when the maximum permitted pressure is reached, let out the air, align tyres, lubricate the tyre heels and pump up the tyre again.
- Detailed information about how to fit tyres onto agricultural machinery can be obtained from the tyre manufacturers.

13.8.1 Checking and maintaining tyres

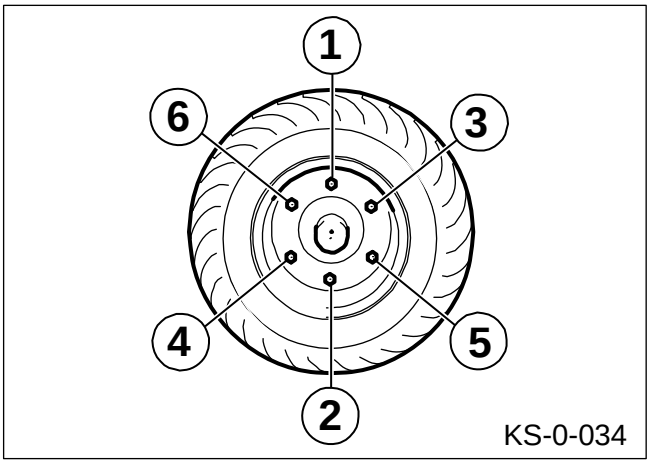


Fig. 228

When loosening and tightening the wheel nuts, observe the order indicated in the illustration. 10 operating hours after they have been mounted, check the wheel nuts and retighten them if necessary. After that, check them every 50 operating hours to make certain they are tight. Check the tyre pressure at regular intervals and refill if necessary. The tyre pressure depends on the size of the tyres. The values are listed in the table.

Tightening Torque

Threading	Key size in mm	Number of bolts per hub - pieces	Max. tightening torque	
			black	galvan.
M12 x 1.5	19	4/5	95 Nm	95 Nm
M14 x 1.5	22	5	125 Nm	125 Nm
M18 x 1.5	24	6	290 Nm	320 Nm
M20 x 1.5	27	8	380 Nm	420 Nm
M20 x 1,5	30	8	380 Nm	420 Nm
M22 x 1.5	32	8/10	510 Nm	560 Nm
M22 x 2	32	10	460 Nm	505 Nm

13.8.2 Tyre air pressure

Check the tyre pressure at regular intervals and refill if necessary. The tyre pressure depends on the size of the tyres. The values are listed in the table.

Tyre designation	Minimum pressure [bar] Vmax<= 10 km/h	Maximum pressure [bar]	Recommended tyre pressure* [bar] Vmax<= 10 km/h	
			Individual	Tandem
15 x 6.00 - 6 6PR	1.5	3.7	2.5	--
500/50-17 10 PR	1.0	3.0	1.5	1.5
500/55-20 12 PR	1.0	3.0	1.5	1.5
620/40-17-R 22.5	1.0	4.0	3.2	3.2

*) This recommendation applies especially to the typical mixture of operation (field/road) at the maximum permitted machine speed.

If necessary, the tyre air pressure can be reduced to the minimum air pressure. However, the associated maximum speed must then be observed.

13.9 Drawbar

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

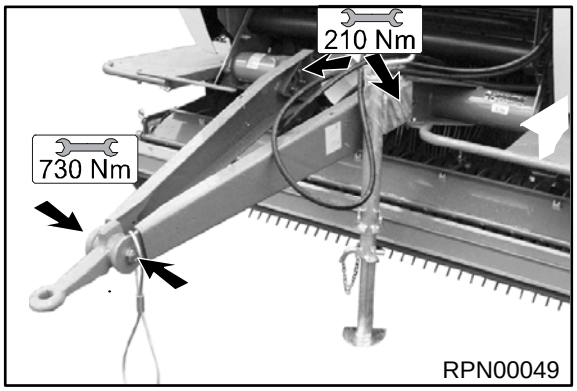


Fig. 229

- Tighten screws after 10 operating hours
- Check screws every 50 operating hours

13.9.1 Hitches on the Drawbar

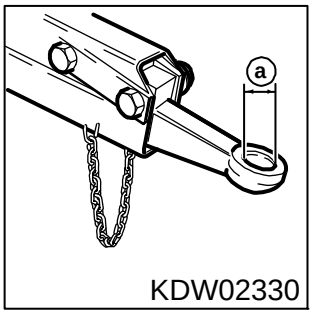


Fig. 230

Caution!
If the wear limit of the socket in the towing ring has been reached, it must be replaced. Work on the drawbar must only be performed by trained professionals.

The wear limit of the socket in the towing ring (1) is **a = 43 mm**. If this value is exceeded, the socket must be replaced. To minimise wear, clean the socket and towing ring daily and lubricate them with grease.

Note
The towing ring should be coupled always horizontally in the towing hitch. Observe the correct combination of towing ring and towing hitch (observe the specifications on the type plate!)

13.10 Oil Level Check and Oil Change on the Gearboxes

Note! - Do not mix different types of oil.
Effect: Damage to the machine
- Never mix different types of oil.
- Before changing the type of oil, consult customer service. Never use engine oil.

ENVIRONMENT! - Disposal and storage of used lubricants and oil filters
Effect: Environmental damage
Store or dispose used oil and oil filters according to statutory provisions.

13.10.1 Oil Level Check and Oil Change Intervals (Gearboxes)

Note - oil level check and oil change (gearboxes) and lubricating the machine
Effect: Long expected service life of machine
- Oil change on all gearboxes after 30 to 50 operating hours and then after every season.
- Oil level check each time before using and no later than after about 500 pressed round bales.
- Compliance with the changing intervals is absolutely essential for bio-degradable oils because of ageing of the oils.

13.10.2 Filling Quantities and Lubrication Designations for Gearboxes

	Filling Quantity [Litres]	Filtered oils Brand name	Bio-degradable lubricants Brand name
Main gearbox	0.7 l	SAE90	**On request**
Slip-on gear	0.5 l	SAE90	
Gearbox on wrapping arm	1.0 l	Fluid gear grease GFO 35 (permanently lubricated with grease)	

13.10.3 Main drive

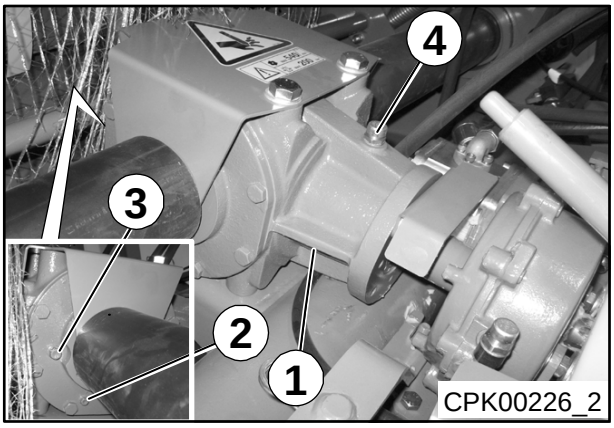


Fig. 231

The main drive (1) is located behind the drawbar in the front area of the machine. Inspection screw and filler plug (3) are located on the side of the gearbox. The oil drain plug (2) is located below on the gearbox (4).

Note

Perform oil level check and change the oil while the machine is in a horizontal position!

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

Oil Level Check:

- For time intervals, see Chapter entitled “Time Intervals for Oil Level Check and Oil Change on the Gearboxes”
- Unscrew the inspection screw (3)
- The oil level must reach up to the control hole
- Refill oil if necessary (SAE 90)
- Screw in the inspection screw (3).

Oil Change:

- For time intervals, see Chapter entitled "Oil Level Check and Oil Change Intervals on the Gearboxes”
- Unscrew oil drain plug (2) and inspection screw (3)
- Collect the oil in a suitable container
- Screw in the oil drain plug (2)
- Fill in oil up to the overrun by means of the control drill hole (3)
- Screw in the inspection screw (3).

13.10.4 Slip-on Gear

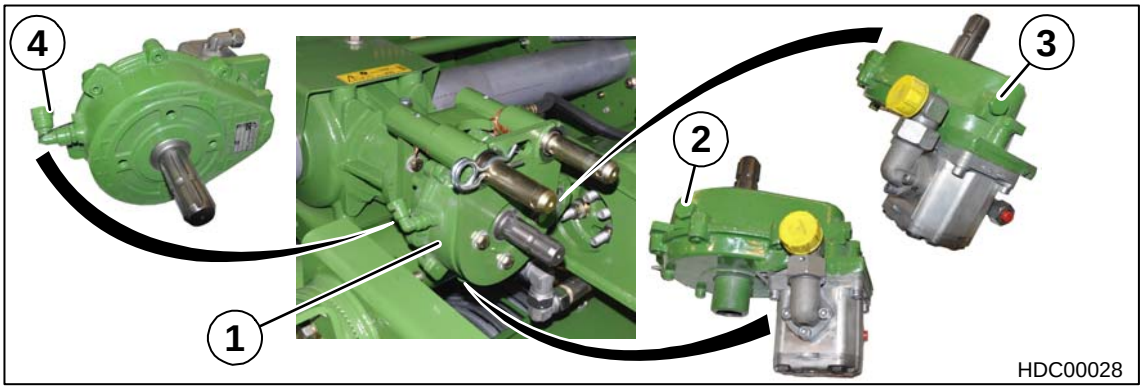


Fig. 232

Note
Perform oil level check and change the oil while the machine is in a horizontal position!

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

Oil level check:

- For time intervals, see Chapter "Oil Level Check and Oil Change Intervals (Gearboxes)".
- Unscrew the inspection screw (2).
- The oil level must reach up to the control hole.
- If necessary, top up the oil (SAE 90)
- Screw in the inspection screw (2)

Oil Change:

- For time intervals, see Chapter entitled "Oil Level Check and Oil Change Intervals on the Gearboxes”
- Unscrew oil drain plug (2) and inspection screw (3)
- Collect the oil in a suitable container
- Screw in the oil drain plug (2)
- Top up the oil at the oil filler neck (4) up to the control drill bore
- Screw in the inspection screw (2)

13.11 Screw connections at the front and rear of the floor conveyors

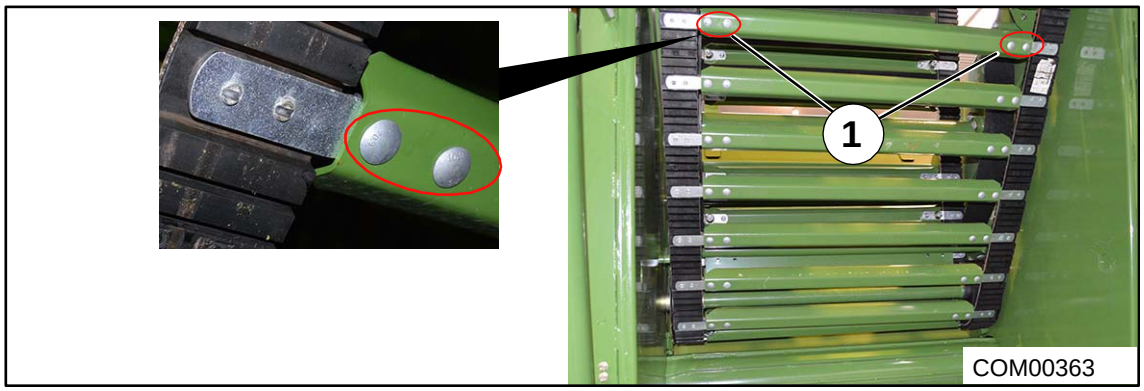


Fig. 233

- Set the torque wrench to 40 Nm.
- Tighten the nuts on the screw connection (1). If the torque is not reached, loosen the screw connection (1).
- Check the threading on the screw and nut. If damaged, use new parts.

The necessary materials can be ordered from the spare parts warehouse using the following material numbers.

Designation	Material number	Unit numbers per rod
Coach bolt M10x35	90 001 687 0	4
Detent edged washer SKM 10	00 909 909 1	4
Locknut M10 A3G	00 908 758 0	4

Note

The tightening torque for the screw connection is 70 Nm and it is absolutely essential that it is observed!

Loctite high strength (high-strength thread locker 50 ML bottle) can be ordered from the spare parts warehouse using order number
935 512 0:

For changing all screws on the floor conveyor of the machine, the following unit numbers are needed:

Designation	Material no.	Comprima CF155XC	Comprima CV150XC		
			Floor conveyor at front	Floor conveyor at rear	Total
Coach bolt M10x35	90 001 687 0	220	100	164	264
Detent edged washer SKM 10	00 909 909 1	220	100	164	264
Lock nut M10 A3G	00 908 758 0	220	100	164	264

Comprima CV 210 XC

Designation	Material number			
		Front floor conveyor	Rear floor conveyor	Total
Coach bolt M10x35	90 001 687 0	86	108	194
Coach bolt M10x60	90 001 953 0	30	108	138
Detent edged washer SKM 10	00 909 909 1	116	216	332
Locknut M10	90001 230 0	116	216	332
Countersunk screw Torx M10x25	90 000 521 0	116	216	332

13.12 Novo Grip belt on the floor conveyor

The Novo Grip belts consist of a composite material (rubber and tissue). Under load, franges come into being on the cutting edges. They must be removed regularly.

- Check the Novo Grip belts at least once a week on the formation of fringes and cut off the fringes, if necessary.

13.13 Checking the Safety Rollers of Single Blade Locking Device

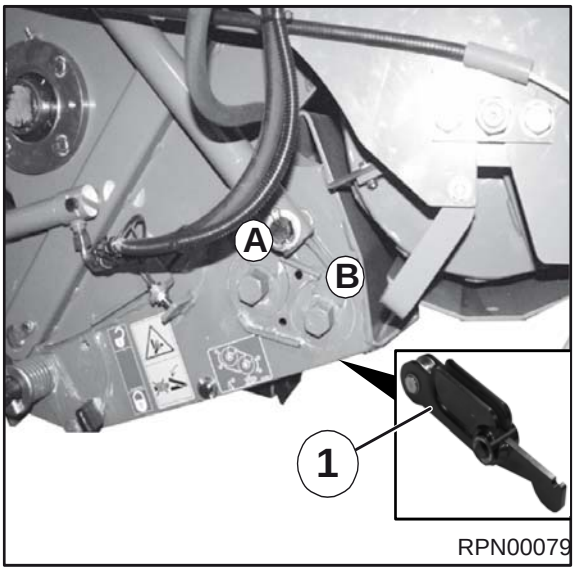


Fig. 234

The safety rollers (1) on the levers of the single blade locking device must turn slightly when they are turned on (tension of safety springs with multipurpose key after blades are installed). If they do not, the result will be an increased amount of force when switching. The individual knife retention will not work properly (increased blade breakage). To prevent this, lubricate the safety rollers (1) if they no longer turn easily. However, at least once a year.

Note

To lubricate the safety rollers, use an EP long-term grease NLGI 2 order No. 926 045 0 (400 grams).

13.14 Checks and maintenance on rear floor conveyor

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

Comprima CV 150 / CV 210 XC

Note
Perform the following check after producing around 1000 bales to prevent damage or tearing of the rear floor conveyor.

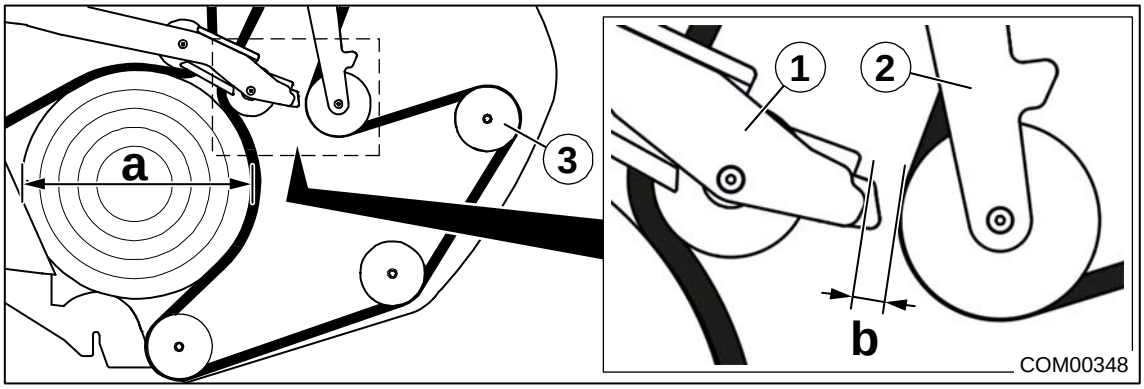


Fig. 235

At a bale diameter (a) between 800 and 1000 mm, check whether the distance (b) between the front tensioning rocker (1) and the rear tensioning rocker (2) is at least 20 mm.

If the distance is at least 20 mm, everything is OK.

If the distance is less than 20 mm, the deflection roller (3) must be adjusted, see "Adjusting the deflection roller" maintenance chapter.

13.14.1 Adjusting the deflection roller

Prerequisites

– The left side protector is raised.
– The left plastic protector is detached.

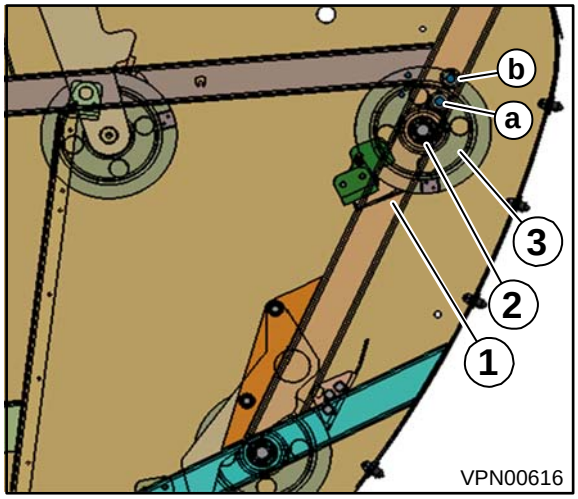


Fig. 236

- Dismount scraper (1).
- Remove the threaded pin from the adjusting ring on the deflection pulley (2) and remove the adjusting ring.
- Dismount deflection shaft (2) and mount with deflection shaft (3) in position (a).
- Push the adjusting ring onto the deflection shaft (2) and secure with threaded pin.
- Mount scraper (1) at a higher position.
- Check whether the tensioning rocker still touches the belt (brush marks). Move scraper and deflection pulley up into hole (b), if necessary.

Note
Only mount the deflection roller (3) 1 hole higher as otherwise the belt is unnecessary loaded.

13.15 Wrapping table chain

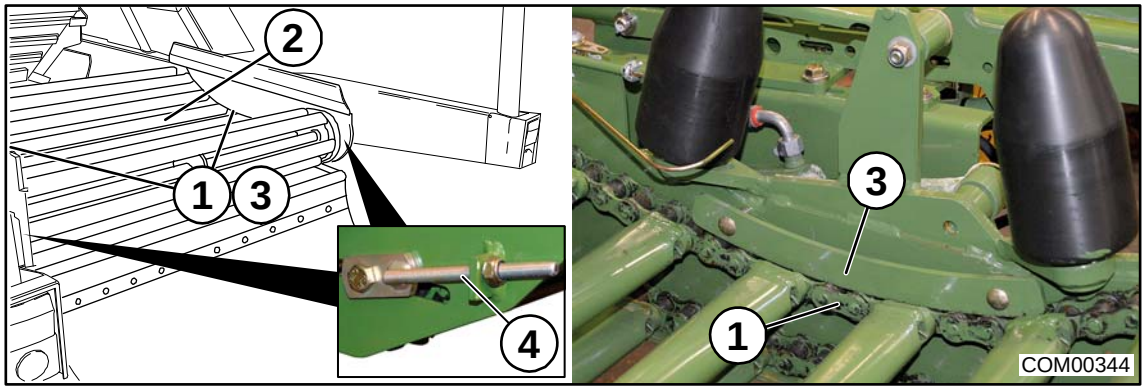


Fig. 237

The wrapping table chain (1) must be tensioned on both sides of the wrapping table (2) so that it is positioned on the chain guides (3).

- Always check the tension of the wrapping table chain before use.

If the wrapping table chain is positioned on the chain guides, the chain tension is correct.

If the wrapping table chain is not positioned on the chain guides:

- Retension the wrapping table chain using the chain tensioner (4).

13.16 Drive chains

WARNING! – Danger of entanglement in the drive chains!
Effect: Risk of injury caused by entanglement of loose long hair or loose clothing.
- After working on the chains, always reassemble or close the safety devices.

All drive chains are supplied with oil by a central chain lubrication system.
As the lubricating oil lines are not highly pressurised, it may occur that they jam. For this reason the lubricating oil lines must be checked for proper functionality daily before using.
The mode of operation of the central chain lubrication system is explained in the Chapter entitled “Settings”.

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

13.16.1 Tensioning the Drive Chains

13.16.1.1 Front Floor Conveyor Drive

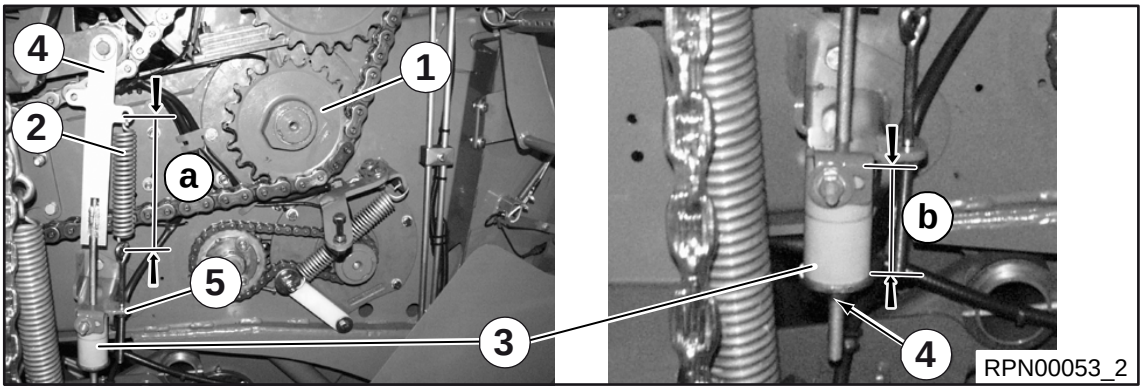


Fig. 238

The front floor conveyor drive (1) is located on the left side of the machine.

Check the Chain Tension:

- The chain is tightened by the tension spring (2). The length of the spring when tightened must be a = 220 mm.

Correct the Chain Tension:

- Turn the nut (4) on the threaded rod to adjust the stop pad (3) (used only as a stop) to a dimension b between 105 - 110 mm. Select dimension B in that way that a play between support (5) and stop pad (3) is available.

Note
In case the spring tension is insufficient, the flat bar (6) can be turned and the other eye can be used.

13.16.1.2 Rear Floor Conveyor Drive

Comprima CV 150 / CV 210 XC

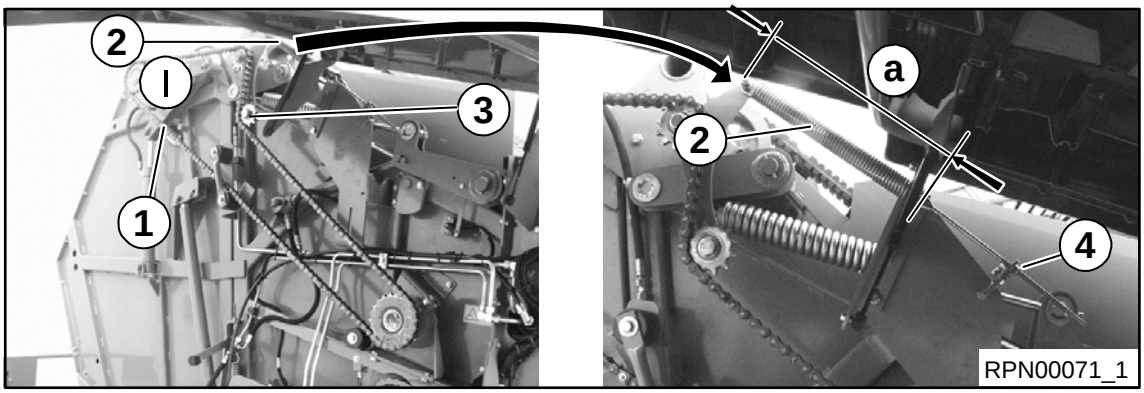


Fig. 239

The rear floor conveyor drive is located on the right side of the machine.

Check the Chain Tension:

The length of the spring (a) when tightened must be:	approx. 495 mm (CV150XC)
	approx. 465 mm (CV210XC)

Correct the Chain Tension:

- Turn the nut (4) to increase or decrease the spring tension of the tension spring (2) on the threaded rod until the distance (a) is set on the above mentioned values.

13.16.1.3 Pick-up

WARNING! – Crush hazard!
Effect: Foot injuries.
- Lower pick-up to the ground.

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

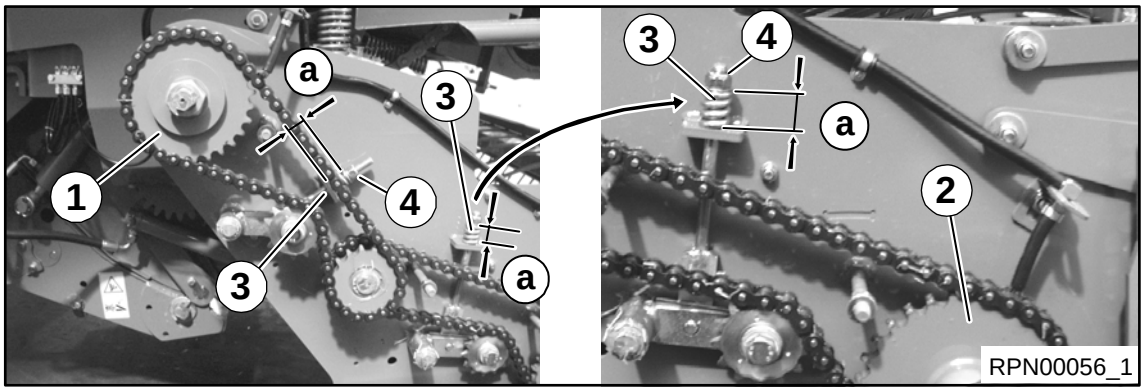


Fig. 240

The main pick-up drive (1) and the pick-up drive (2) are located on the pick-up on the right side of the machine. The drive chains are tightened with clamping elements (3).

Check the Chain Tension:

The length of the spring when tightened must be a = 30 mm.

Correct the Chain Tension:

- Turn the nut (4) to increase or reduce the spring tension of the compression spring (3) until distance a= approx. 30 mm is set

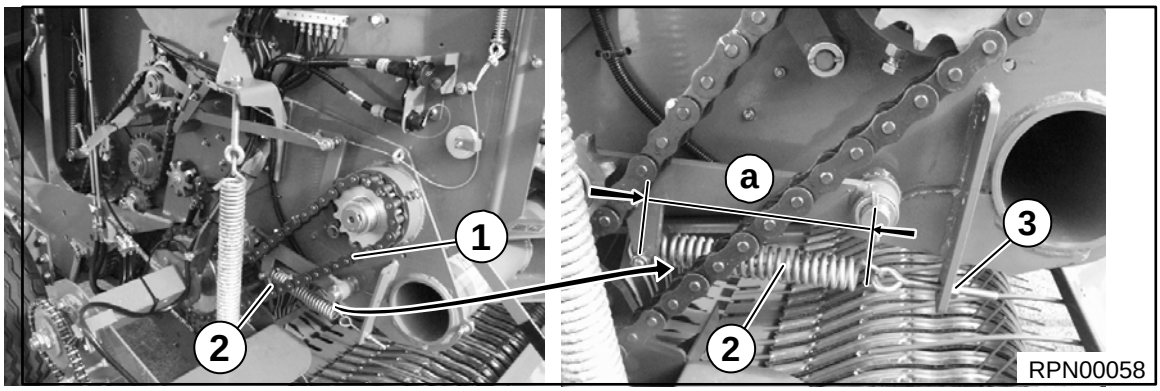


Fig. 241

The cutting roller drive pick-up (1) is located on the right-hand side of the machine.

Check the Chain Tension:

The length of the spring when tightened must be a = 200 mm.

Correct the Chain Tension:

- Turn the nut (3) to increase or reduce the spring tension of the compression spring (2) until distance a= approx. 200 mm is set

Spring discs on the main drive of the pick-up

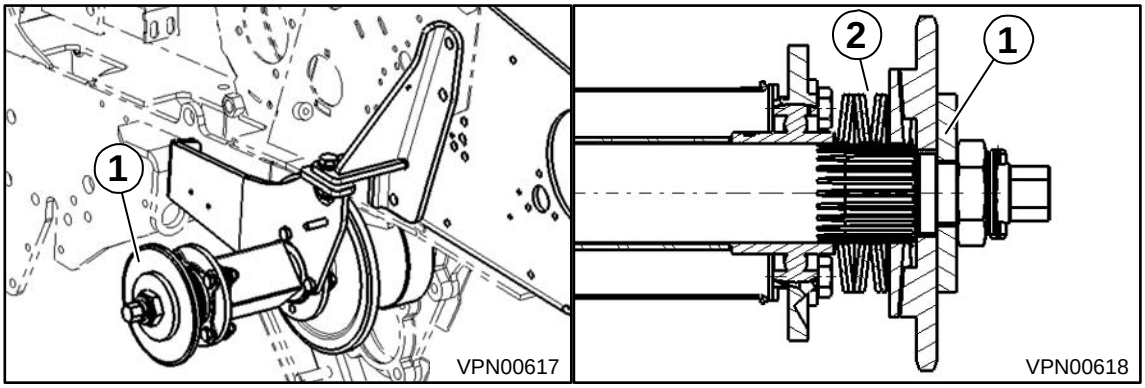


Fig. 242

Note

After repairing the main drive (1), ensure during installation that the disc springs (2) are arranged as shown in Fig. VPN00618.

13.16.1.4 Conveyor Auger Drive

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

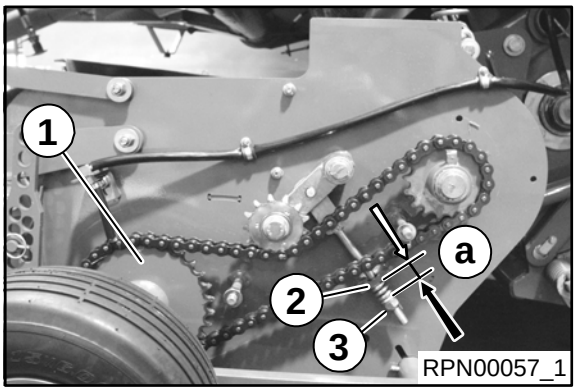


Fig. 243

The auger conveyor drive (1) is located on the pick-up on the left-hand side of the machine.

The drive chain is tensioned by the clamping element (2).

Check the Chain Tension:

The length of the spring when tightened must be a = 30 mm.

Correct the Chain Tension:

- Turn the nut (3) to increase or reduce the spring tension of the compression spring (2) until distance a= approx. 30 mm is set

13.16.1.5 Roller Drive

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

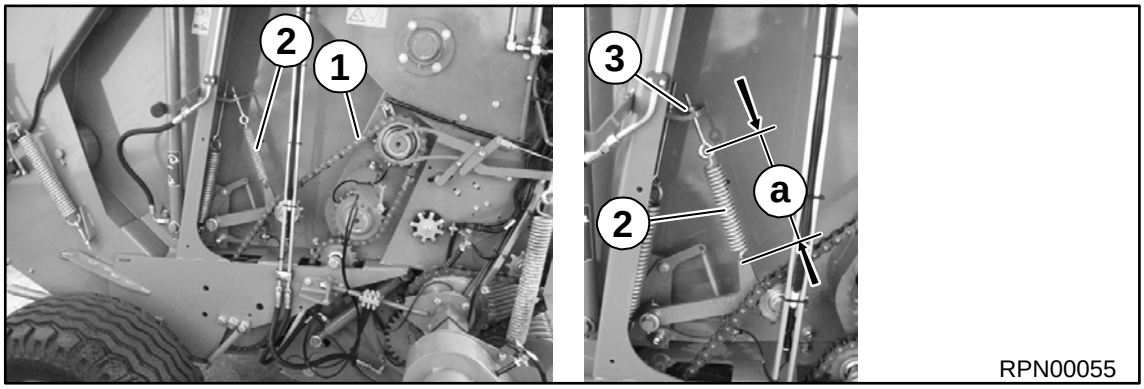


Fig. 244

The roller drive (1) is located on the right side of the machine.

Check the Chain Tension:

The length of the spring when tightened must be a = 220 mm.

Correct the Chain Tension:

- Turn the nut (3) to increase or reduce the spring tension of the compression spring (2) until distance a= approx. 90 mm is set

13.17 Wrapping Arm Bearing

- Shut down and safeguard the machine, see chapter Safety -> Safety routines, "Shutting down and safeguarding the machine".

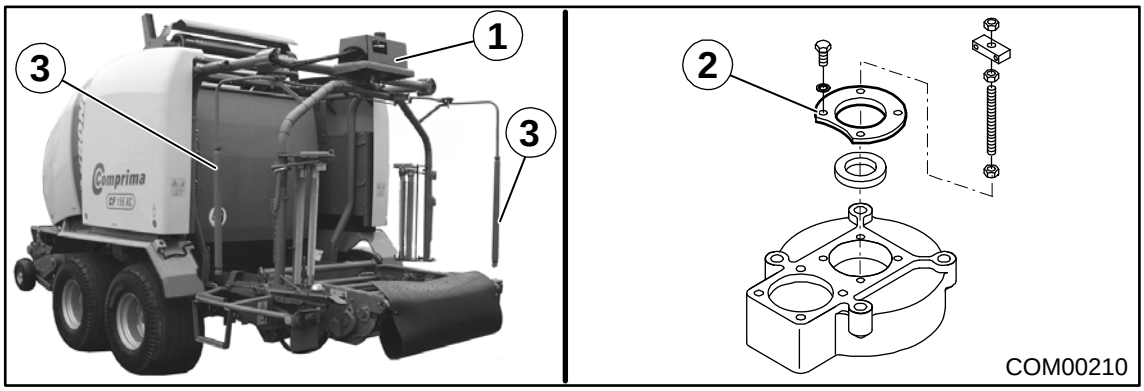


Fig. 245

If the wrapping arm bearing has too much play in the gearbox, it must be raised by placing shim rings under it:

- Remove the protective hood (1).
- Remove the cover (2).
- Insert shim rings Ø63x Ø 80 to adjust the play between bearing and cover.
- Install the cover (2).
- Set the protective hood (1) in place again.
- Then activate both bars (3) and check whether the safety switch is working correctly again.

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13.18 Hydraulics

WARNING!

Risk of injury as a result of incorrect handling of liquids under high pressure.

Effect: Escaping high-pressure liquids can penetrate the skin and cause serious injury.

Repair work on the hydraulic system may only be performed by authorised KRONE professional workshops.

- Depressurise the system before disconnecting lines.
- When searching for leaks, use suitable aids and wear protective goggles.
- High-pressure liquid that is escaping from a small opening is virtually invisible. Therefore, you should use a piece of cardboard or something similar when searching for leaks. Protect your hands and body.
- If liquid penetrates the skin, consult a doctor immediately. The liquid must be removed from the body as quickly as possible. Danger of infection! Physicians who are not familiar with this area must consult appropriate information from a competent medical source.
- Check hydraulic hoses regularly and replace if there are any signs of damage or ageing! The replacement lines must comply with the requirements of the device manufacturer.
- Ensure that all line connections are tight before the pressure in the system builds up again.

WARNING! – Hydraulic hose lines are subject to ageing

Effect: Danger to life or serious injuries

The characteristics of the lines change depending on pressure, heat load and the effect of UV rays.

The date of manufacture appears on the hydraulic hoses. This way the age can be ascertained quickly.

By law the hydraulic lines must be replaced after six years.

Use original spare parts when replacing hydraulic hoses!

Note

- When working on the hydraulic system, absolute cleanliness is essential
- Check the hydraulic oil level each time before placing the machine in operation
- Observe the intervals for replacing the hydraulic oil and hydraulic oil filter
- The used oil must be disposed of correctly

13.18.1 Shut-off valve for tailgate

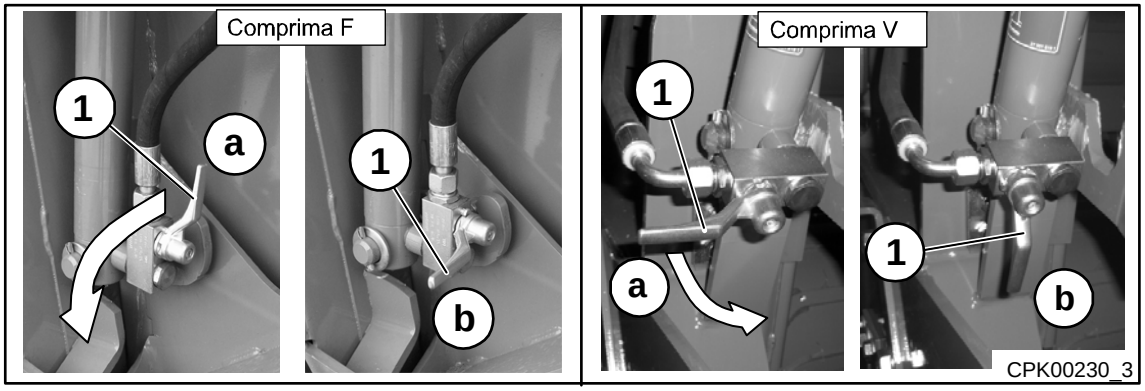


Fig. 246

Pressure is supplied to the machine hydraulics through hoses from the tractor. Along with various parts, the shut-off valve (1) on the left hydraulic cylinder should be mentioned.

It is designed as a safety component to prevent the tailgate from closing unintentionally.

Position "a"

Hydraulic cylinder return opened. The tailgate can be closed.

To close the tailgate always return the shut-off valve to position **"a"** after working inside the bale chamber or on the tailgate.

Position "b"

Hydraulic cylinder return locked. The tailgate cannot be closed.

Always move the shut-off valve to position **"b"** for work inside the bale chamber and on the open tailgate.

13.18.2 On-board Hydraulic System

DANGER! - The hydraulic system is pressurised!
Effect: Danger to life, injuries or damage to the machine.
Before any work is performed on the hydraulic system of the machine,

- the complete hydraulic system must be switched depressurised
- the handwheel (1) must be completely screwed out from the accumulator connection block (2) (parking position).
- the tailgate must be closed.

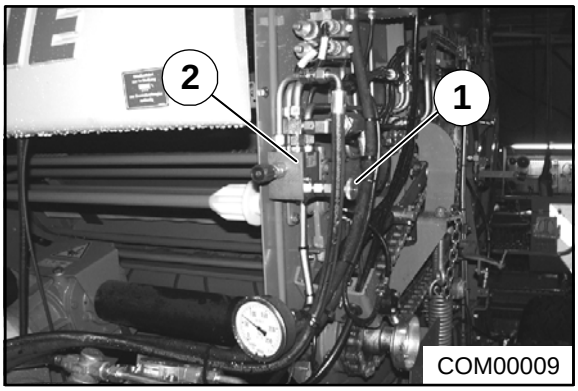


Fig. 247

The on-board hydraulic pump is driven via a gear directly by the PTO shaft. The hydraulic tank is located on the left rear machine side. The hydraulic filter of the on-board hydraulic system is located at the front left on the machine. The control valves are located at the sheet compartment on the left side of the machine.

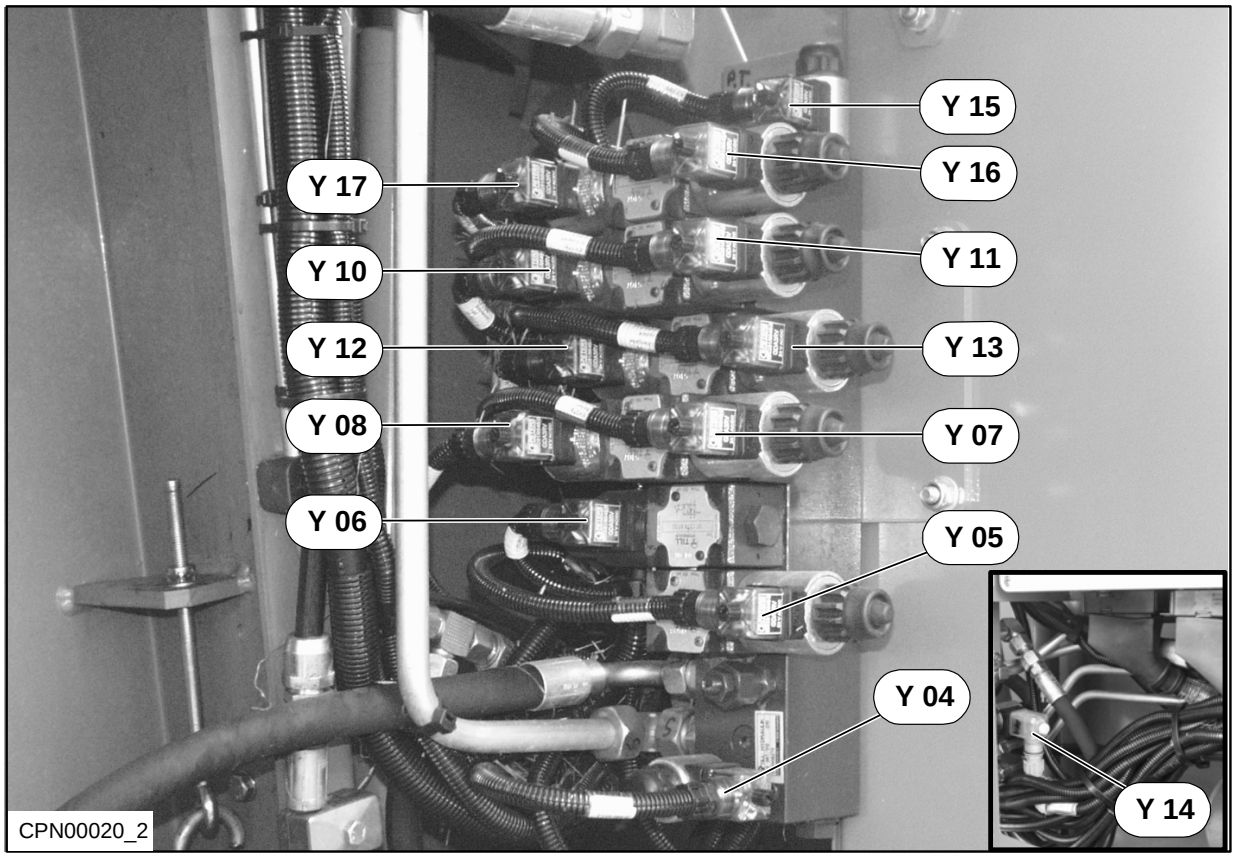


Fig. 248

Y04	Function I (S10)	Y012	Transfer forward (S5)
Y05	Valve block	Y013	Transfer back (S4)
Y06	Control valve wrapping arm (S1)	Y014	Sheet tear (S12)
Y07	Close bale chamber (S2)	Y015	Release holding arms (S13)
Y08	Open bale chamber (S3)	Y016	Open holding arms (S8)
Y10	Swivel table forward (S7)	Y017	Close holding arms (S9)
Y011	Swivel table back (S6)		

13.18.3 Hydraulic Tank

ENVIRONMENT! - Disposal and storage of used lubricants and oil filters
Effect: Environmental damage
Store or dispose used oil and oil filters according to statutory provisions.

Note
Check the hydraulic oil level when the hydraulic oil is warm. When checking the oil level, the tailgate must be closed and the bale lifting device must be located in the lower position.

Filling quantity and oil designation:

	Comprima		**Designation/Brand**	**Bio-degradable lubricants**
	CF155 XC CV150 XC	**CV210 XC**		
Hydraulic tank	27 l	47 l	HLP ISO-VG 46 (initial equipment) HVLP ISO-VG 32/46 HEES 46 (bio-degradable very quickly)	on request

Note
The types of oil must not be mixed! When changing, observe the VDMA guidelines!

Comprima CF 155 XC/Comprima CV 150 XC

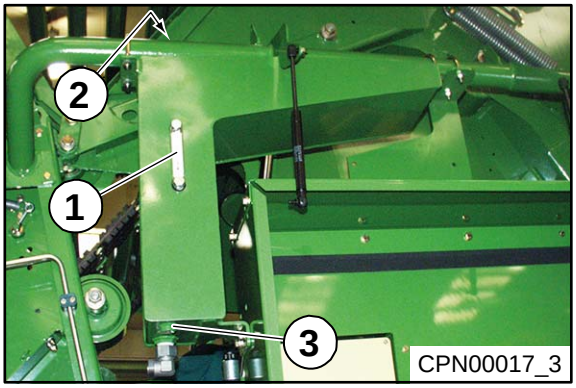


Fig. 249

1) Inspection glass
2) Filler neck
3) Locking screw

To check the oil level:

Prerequisite

– The tailgate must be closed.

- Read the oil level on the inspection glass.

If the inspection glass shows a level of 3/4 or more, the oil level is correct.

If the inspection glass shows a level below 3/4:

- Clean the area around the filler neck.
- Top up the oil up to the 3/4 mark using the filler neck.

Oil Changing Interval:

- Every 500 operating hours
- At least after each season

Oil change:

Prerequisite

– The tailgate must be closed.

Collect escaping oil in a suitable container.

- Unscrew the locking screw and drain the oil.
- Screw in the locking screw.
- Pour in fresh oil up to the 3/4 mark of the inspection glass using the filler neck.

Comprima CV 210 XC

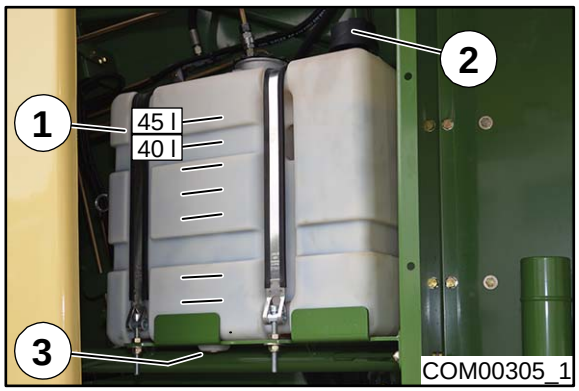


Fig. 250

1) Scale
2) Ventilation filter
3) Drain screw

To check the oil level:

Prerequisite

– The tailgate must be closed.

- Read off the oil level on the scale.

If the scale shows a level between 40 and 45 l, the oil level is correct.

If the scale shows a level below 40 l:

- Clean the area around the ventilation filter.
- Top up the oil up to the 45 l mark using the ventilation filter.

Oil Changing Interval:

- Every 500 operating hours
- At least after each season

Oil change:

Prerequisite

– The tailgate must be closed.

Collect escaping oil in a suitable container.

- Unscrew the drain screw and drain the oil.
- Screw in the drain screw.
- Pour in fresh oil up to the 45 l mark on the scale using the ventilation filter.

13.18.4 Changing the filter on the hydraulic tank

Comprima CF 155 XC/Comprima CV 150 XC

Changing the ventilation filter:

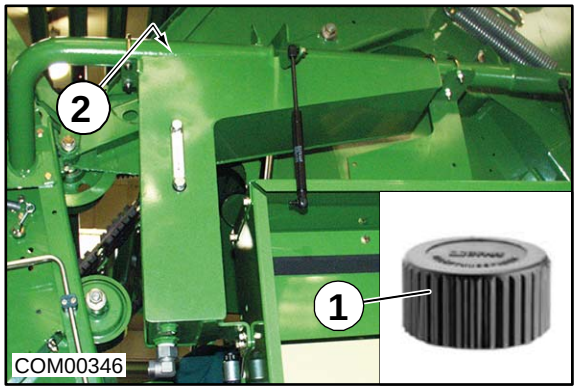


Fig. 251

The ventilation filter is permanently installed in the cap (1) of the filler neck (2). To change the ventilation filter, the complete cap must be replaced.

Filter Replacement interval

- Change the cap, including ventilation filter, once a year.

Filter change

- To change the ventilation filter:
- Unscrew the old cap.
- Screw in the new cap.

Note
The cap, including ventilation filter, must be ordered from the KRONE spare parts warehouse quoting part number 00 219 169 0.

Comprima CV 210 XC

Changing the ventilation filter:

Fig. 252

The ventilation filter is permanently installed in the cap (1). To change the ventilation filter, the complete cap must be replaced.

Filter Replacement interval

- Change the cap, including ventilation filter, once a year.

Filter change

- To change the ventilation filter:
- Unscrew the old cap.
- Screw in the new cap.

Note

The cap, including ventilation filter, must be ordered from the KRONE spare parts warehouse quoting part number 27 011 473 0.

Changing the return line filter:

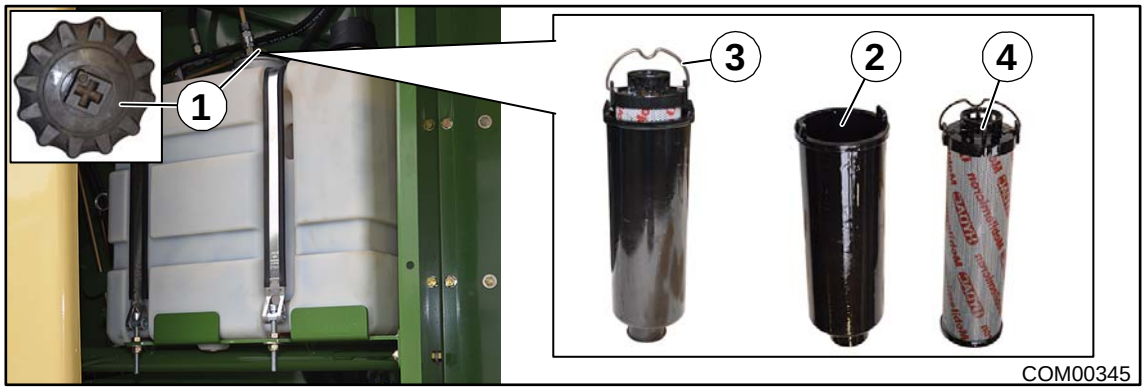


Fig. 253

Filter Replacement interval

- Change the filter element in the return line filter once a year.

Filter change

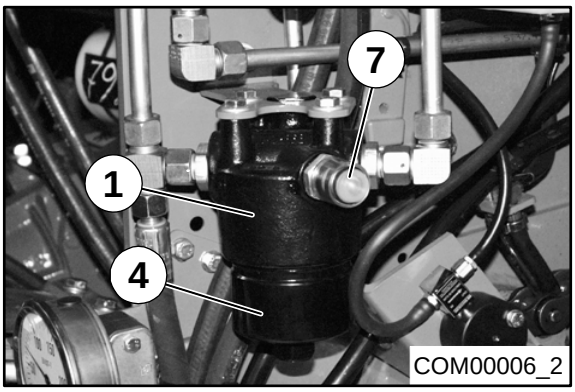
- Loosen the cover (1) with a spanner.
- Take out the filter housing (2) by the handle (3).
- Take the old filter element (4) out of the filter housing.
- Insert the new filter element into the filter housing and screw in until the filter element clicks into place.
- Insert the filter housing into the hydraulic tank.
- Screw in the cover and retighten lightly using a spanner.

Note

The filter element must be ordered from the KRONE spare parts warehouse quoting part number 27 011 472 0.

13.18.5 Replacing the Hydraulic Oil Filter

ENVIRONMENT! - Disposal and storage of used lubricants and oil filters
Effect: Environmental damage
Store or dispose used oil and oil filters according to statutory provisions.



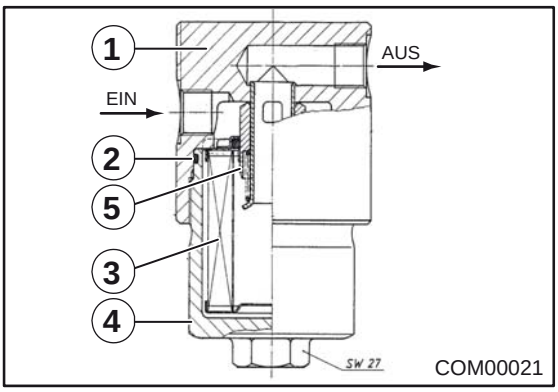


Fig. 254

The filter takes up depositions of solid particles of the hydraulic system. The filtering of the hydraulic circuit serves as a prevention of damages on components of the circuit. The filter is equipped with an optical contamination indicator (7). The contamination indicator (7) informs optically about the degree of contamination of the filter.

Note
Check the contamination indicator before the machine is used. If the display field is green, the filter element is OK; if the display field is red, the filter has to be changed.

When starting in cold condition the button on the contamination indicator (7) can hop out. Only insert the button after achieving the operating temperature. In case it immediately hops out again, the filter element needs to be changed.

Replacing the filter element

Note
Store or dispose used oil and oil filters according to statutory provisions.

- Relieve all pressure from the hydraulic system.
- Screw the bottom of the filter (4) off the filter head piece (1) and clean it.
- Remove the filter element (3) and replace it by a new filter element (Order no. 919 730 0).
- Push a new filter element (3) onto the valve sleeve (5).
- Check the O-ring seal (2) and replace it, if necessary, by a new O-ring seal with identical characteristics.
- Screw bottom of the filter (4) back onto the filter head piece.
- Charge the hydraulic system with pressure and check for leaks.

13.18.6 Electromagnetic Valves

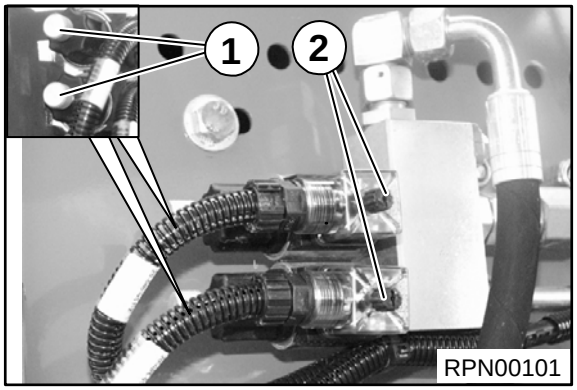


Fig. 255

The electromagnetic valves (2) are located on the left-hand side of the machine behind the guard.

A emergency manual activation of the motional function of the pick-up and the blade base can be carried out on the electromagnetic valves, if the comfort controls fails.

In the event the comfort electronic system fails:

- Screw in the rear subjacent slot screw (1) or the knurled head screw until the pick-up can be lifted or lowered directly from the position of the control valve on the tractor

Note

As soon as the comfort electronic system works correctly again, the slot screw or the knurled head screw on the electromagnetic valve have to be screwed out. Only this guarantees the operation of the pick-up via the operation terminal.

13.19 Grinding blades

Warning!

Grinding blades Effect: Severe injuries to the eyes

- Always wear safety gloves and goggles when grinding the blades

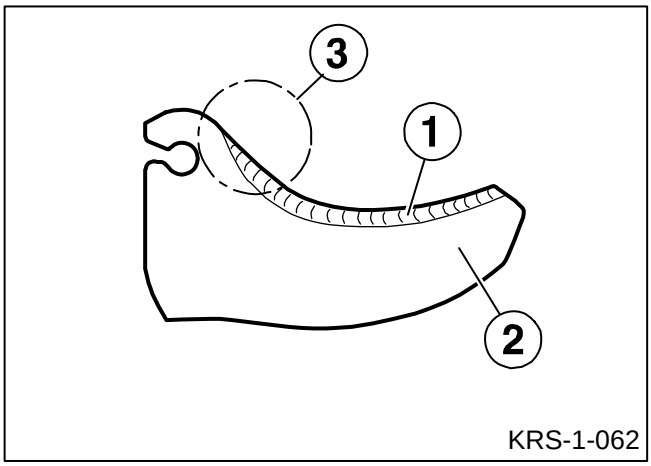


Fig. 256:

Check the sharpness of the blades (2) daily. If necessary, grind the blades after they have been removed on the back of the cutting edge (1). Grind only the ungrooved side. When grinding, make certain no notches are made in area (3).

Note

If at all possible, use the KRONE grinding mechanism for grinding. The Part No. for the blade holder for the KRONE blade grinding tool is
940 003-0.

Avoid allowing the blades to heat up too much when grinding them. The cutting blades are too hot if you can see discolouration in them. Excessive heat reduces the service life of the cutting blades.

The blades (2) must be checked before installation in area (3) (contact point to the stop bar) for accumulations and thoroughly cleaned if necessary. Otherwise it may no longer be possible to swivel the blade bar in completely.

13.20 Maintenance – brake system (special equipment)

WARNING!

If the basic safety instructions are not followed, people may be seriously injured or killed.

- To avoid accidents, the basic safety instructions in the chapter Safety must have been read and followed, see chapter Safety "Basic safety instructions".

WARNING!

If the safety routines are not adhered to, people may be seriously injured or killed.

- To avoid accidents, the safety routines in the chapter Safety must be read and followed, see chapter Safety "Safety routines".

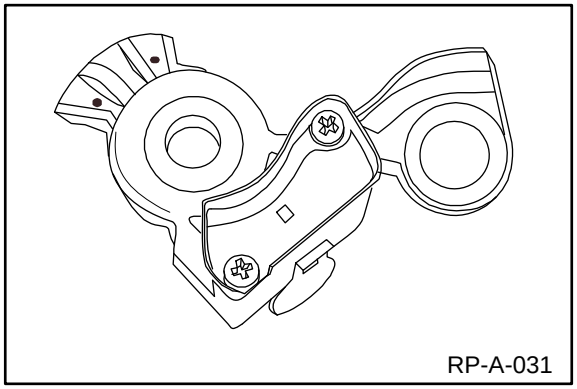
WARNING!

Risk of injury resulting from damage to the brake system

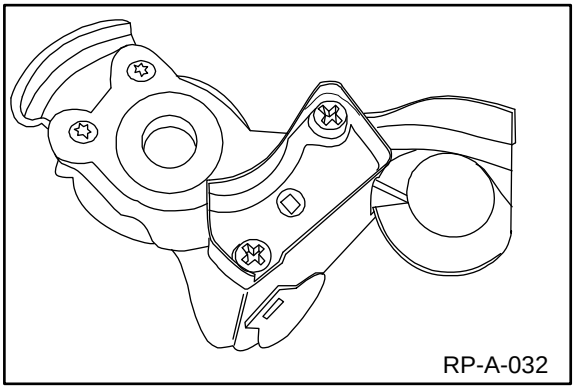
Damage to the brake system may impair the operational safety of the machine and cause accidents. As a result, people may be seriously injured or killed.

- Adjustment and repair work on the brake system must only be performed by authorised professional workshops or recognised brake services.
- Have the brakes checked regularly by a specialist workshop.
- Have damaged or worn brake hoses replaced immediately by a specialist workshop.
- Irregularities or malfunctions in the brake system must be rectified immediately by a specialist workshop.
- Only a machine with an intact brake system may be used for work in the field or for travelling on roads.
- No changes may be made to the brake system without the approval of KRONE.
- KRONE is not responsible for natural wear, defects caused by overload or changes made to the brake system.

13.20.1 Coupling heads (non-interchangeable)



"RESERVOIR" coupling head **(colour red)**



"BRAKE" coupling head **(colour yellow)**

Fig. 257

The coupling heads are installed in the dual-line compressed air braking system to connect the reservoir and brake line of the tractor with the machine.

- After uncoupling, close the cover or connect the coupling heads in the empty couplings provided for this purpose so that no dirt can get in them.
- Replace damaged sealing rings.
- Check whether the coupling heads lock into place and make certain there are no leaks.
- Replace faulty heads.

13.20.2 Air filter for pipelines

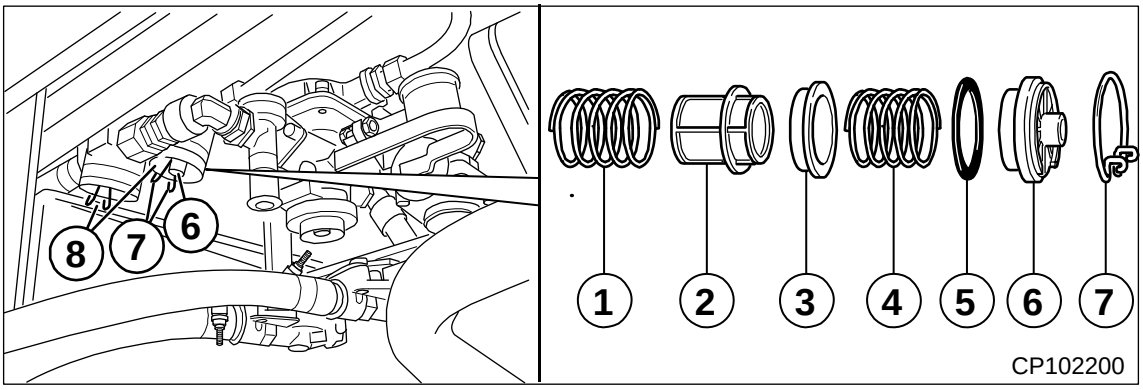


Fig. 258

(1) Spring
(2) Filter
(3) Spacer
(4) Spring
(5) Sealing ring
(6) Cover cap
(7) Clasp locking ring

The air filter (8) cleans the compressed air and protects the brake system from malfunctions.

Note
The brake system is ready for operation even when the filter insert is clogged in both directions of flow.

Removing the Filter Insert

- Press cover cap (6) and loosen the clasp locking ring (7)
- Remove the filter insert

Maintenance of the Air Filter

Clean the filter insert before the beginning of the season.

Installation of the filter insert

Installation is in reverse order to removal.

Note
Observe the correct sequence when assembling the filter insert.

13.20.3 Compressed-air reservoir

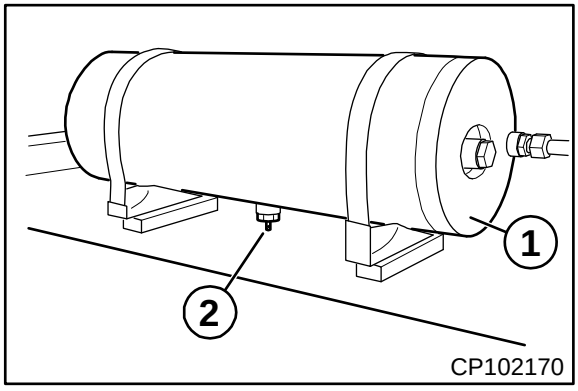


Fig. 259

The compressed air reservoir (1) stores the compressed air that is pumped by the compressor. Therefore condensation water may settle in the compressed air reservoir (1) during operation. The compressed-air reservoir must be emptied regularly. Specifically, it must be emptied:

- daily in winter (when being used),
- otherwise weekly and
- at least after 20 operating hours.

The drain valve (2) on the bottom of the compressed air reservoir (1) is used for draining.

- Switch off and secure the machine
- Open the drain valve and allow the condensation to run out
- Check the drain valve, clean it and screw it back in

Note

If the drain valve has a heavy accumulation of dirt or is leaking, it must be replaced by a new one.

WARNING!

Risk of injury from corroded or damaged compressed air reservoirs.

Damaged or corroded compressed air reservoirs may burst and cause serious injuries.

- Observe the inspection intervals according to the maintenance table, see chapter Maintenance Engine "Maintenance table".
- Have damaged or corroded compressed air reservoirs replaced immediately by a service centre.

14 Maintenance – lubrication

WARNING!

If the basic safety instructions are not followed, people may be seriously injured or killed.

- To avoid accidents, the basic safety instructions in the chapter Safety must have been read and followed, see chapter Safety "Basic safety instructions".

WARNING!

If the safety routines are not adhered to, people may be seriously injured or killed.

- To avoid accidents, the safety routines in the chapter Safety must be read and followed, see chapter Safety "Safety routines".

ENVIRONMENT! - Disposal and storage of lubricants

Effect: Environmental damage

- Store lubricants in eligible containers according to statutory provisions
- Dispose used lubricants according to statutory provisions

DANGER! - Settings on the machine!

Danger to life or serious injuries.

- Swing the shut-off valve (1) on the left hydraulic cylinder from position (a) to position (b) in order to secure the open tailgate against unintentional shutting

14.1 Lubricants

14.2 General aspects

Depending on the design, the machine may be equipped with different lubrication systems. Soft, supple NLGI Class 2 lithium soap greases in accordance with DIN 51825 should be used as lubricating greases. We recommend that you do not use lubricating greases with any other base material.

Note

Do not use greases containing graphite! There may be problems when different greases are mixed together!

Manufacturer	Lubricants based on mineral oil	Bio-lubricants
ARAL	Long-term grease H	On request
BP	Energrease LS-EP2	
DEA	Glissando EP2	
FINA	Marson EPL 2A	
Shell	Alvania Ep2	
ESSO	EGL 3144	

Lubrication points on the machine must be lubricated at regular intervals. The position of the lubrication points and the lubrication intervals can be seen in the lubrication plans in the operating instructions. Remove the grease that comes out of the bearing points after lubrication.

14.3 Lubricating the PTO shaft

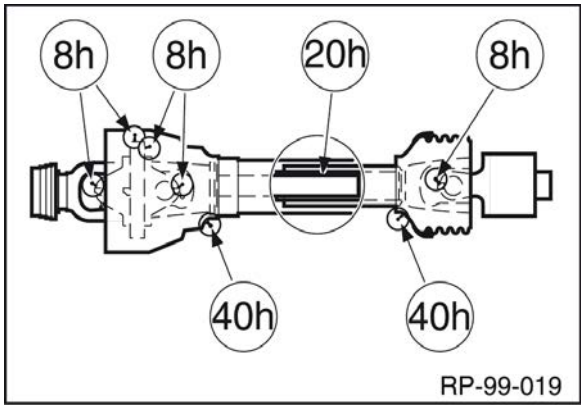


Fig. 260

Lubricate the PTO shafts at the intervals indicated in the drawing with a multi-purpose grease. Follow the operating instructions of the PTO shaft manufacturer.

Note

The instructions of the manufacturer must be observed with regard to the PTO shaft. (separate operating instructions)

14.4 WALTERSCHEID cam-type clutch K64/12 to K64/24, EK 64/22 to EK64/24

CAUTION!

If work has been performed by a specialist workshop that is not qualified, the machine may be damaged!

A qualified specialist workshop has the necessary expertise, qualification and tools for a correct execution of the required works.

- Always perform work by a qualified specialist workshop.

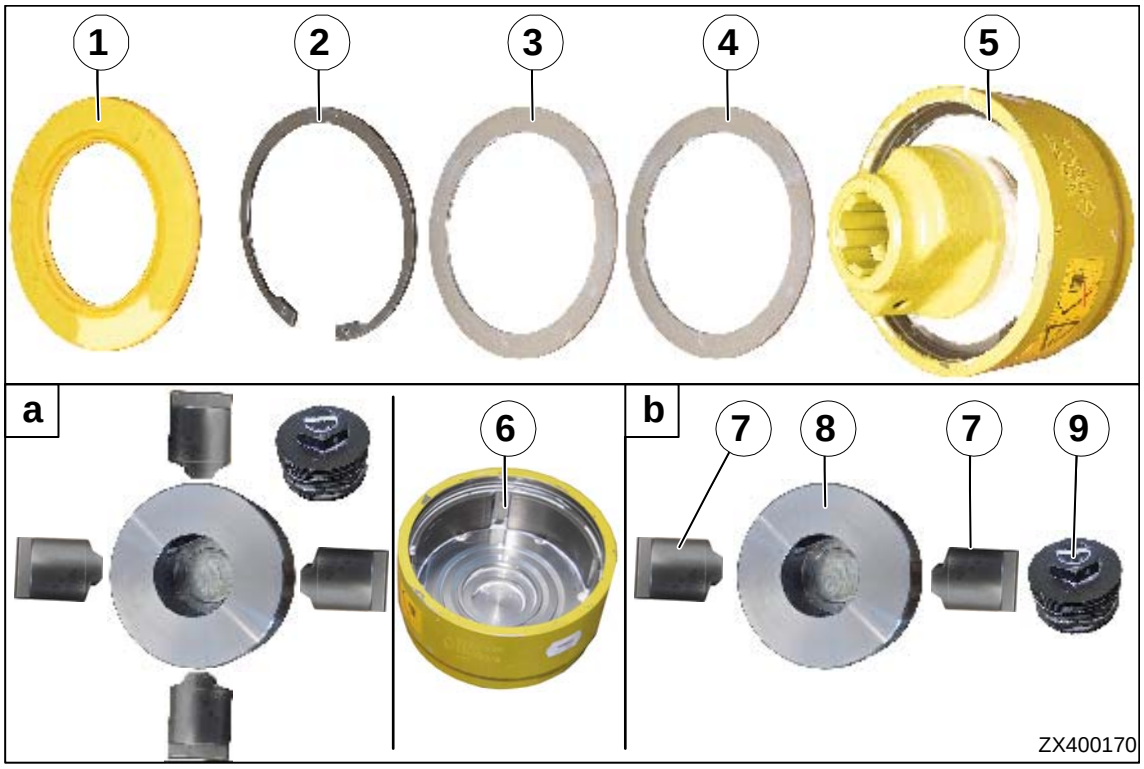


Fig. 261

a)	Version with 4 locking cams	b)	Version with 2 locking cams
1)	Seal ring	2)	Circlip
3)	Support disc	4)	Shim ring
5)	Coupling housing with hub	6)	Coupling housing
7)	Locking cam	8)	Hub
9)	Spring assembly		

Maintenance interval: refer to chapter Maintenance “Maintenance Table”

Prerequisite:

– The machine is stopped and secured.
– The cam-type clutch is removed from the machine.

Decomposing cam-type clutch

- Prise the seal ring out of the coupling housing by using an auxiliary tool (e.g. screwdriver).
- Remove retaining ring.
- Remove support disc and shim rings.
- Remove hub from coupling housing.

Caution! Always observe the position of the bevelled edge on the locking cams when pulling out them.

- Remove the locking cams from the hub.
- Clean all parts.
- Grease all parts with Walterscheid grease by using a brush.

To grease, use Agraset 116 (order no. 304291) or Agraset 147 (order no.102966). The grease must be purchased from Walterscheid.

- Top up the deepening in the coupling housing with grease.

Assembling cam-type clutch

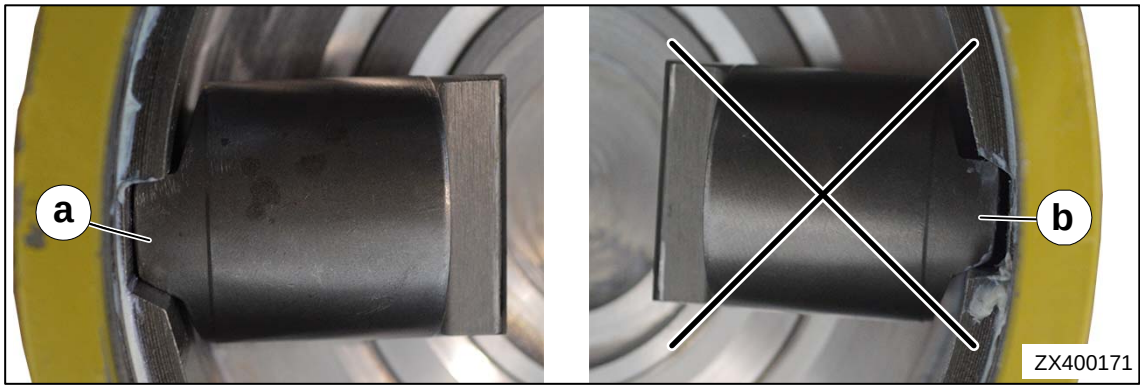


Fig. 262

Caution! Always observe the position of the bevelled edge on the locking cams when inserting the locking cams.

– Locking cam a) = right
– Locking cam b) = wrong

- Insert locking cams into hub.
- Insert the pre-assembled hub into the coupling housing.
- Insert shim rings and support disc and secure with retaining ring.
- Apply grease again on shim rings, support disc and retaining ring.
- Insert seal ring.

14.5 Lubrication points

The following tables contain a list of lubrication points on the machine and the number of lubrication nipples.

Left-hand side

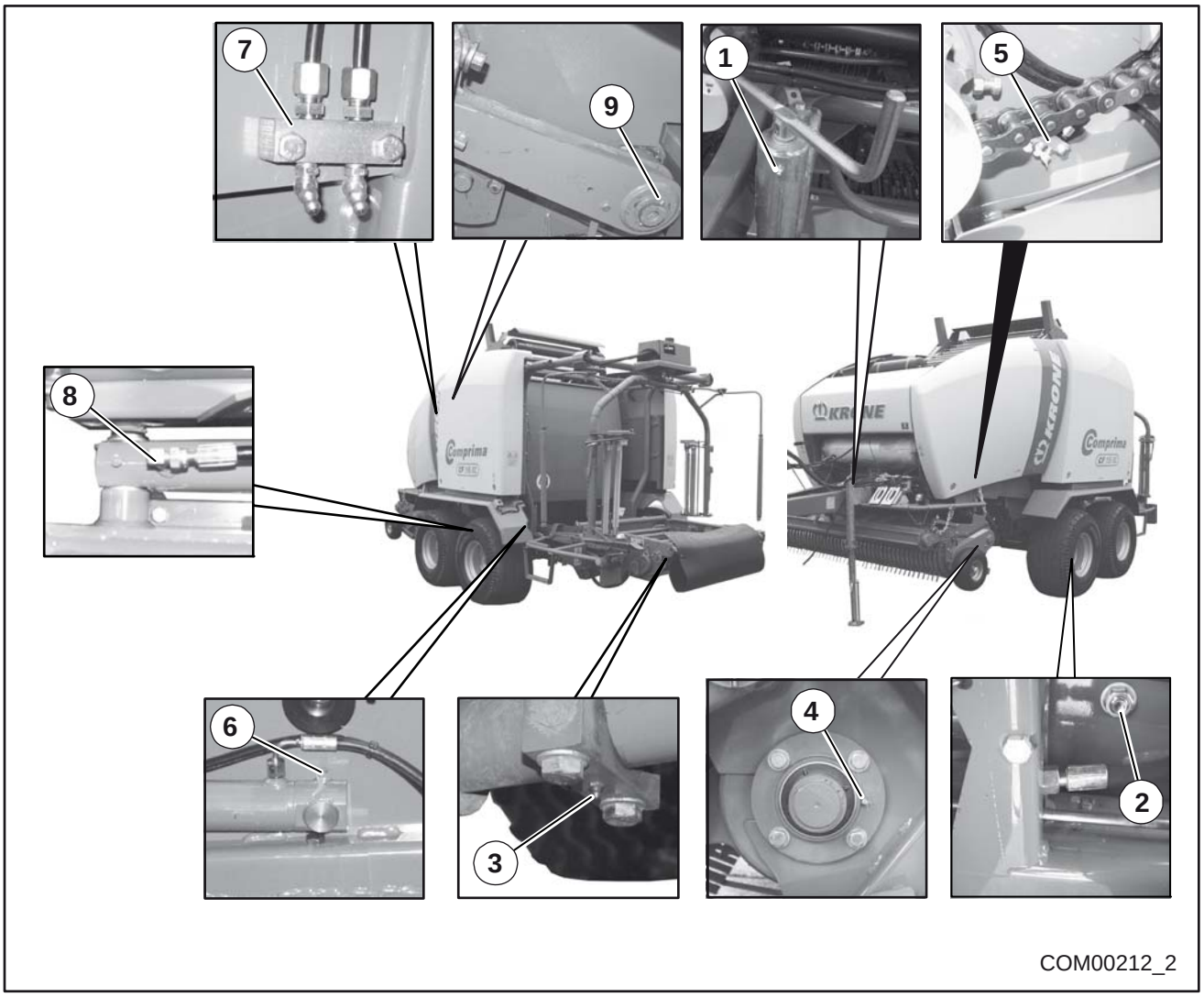


Fig. 263

	Lubrication Points		Number of Grease Nipples	Lubrication Interval
1	Parking jack		1	50 h
2	Tandem axle pendulum arm bearing right/left		2	50 h
3	Bearing wrapping table		1	20 h
4	Cutting roller left		1	20 h
5	Nipple block left:	Floor conveyor at front Lower roller Upper roller	1 1 1	20 h
6	Cylinder swivel table		1	20 h
7	Nipple block right/left:	Rear rocker arm Bearing drive shaft floor conveyor rear (Comprima CV150 /CV210 XC)	1 1	20 h
8	Cylinder bale lifter (only Comprima CF155 XC)		1	20 h
9	Tensioning rocker		1	20 h

Right-hand side

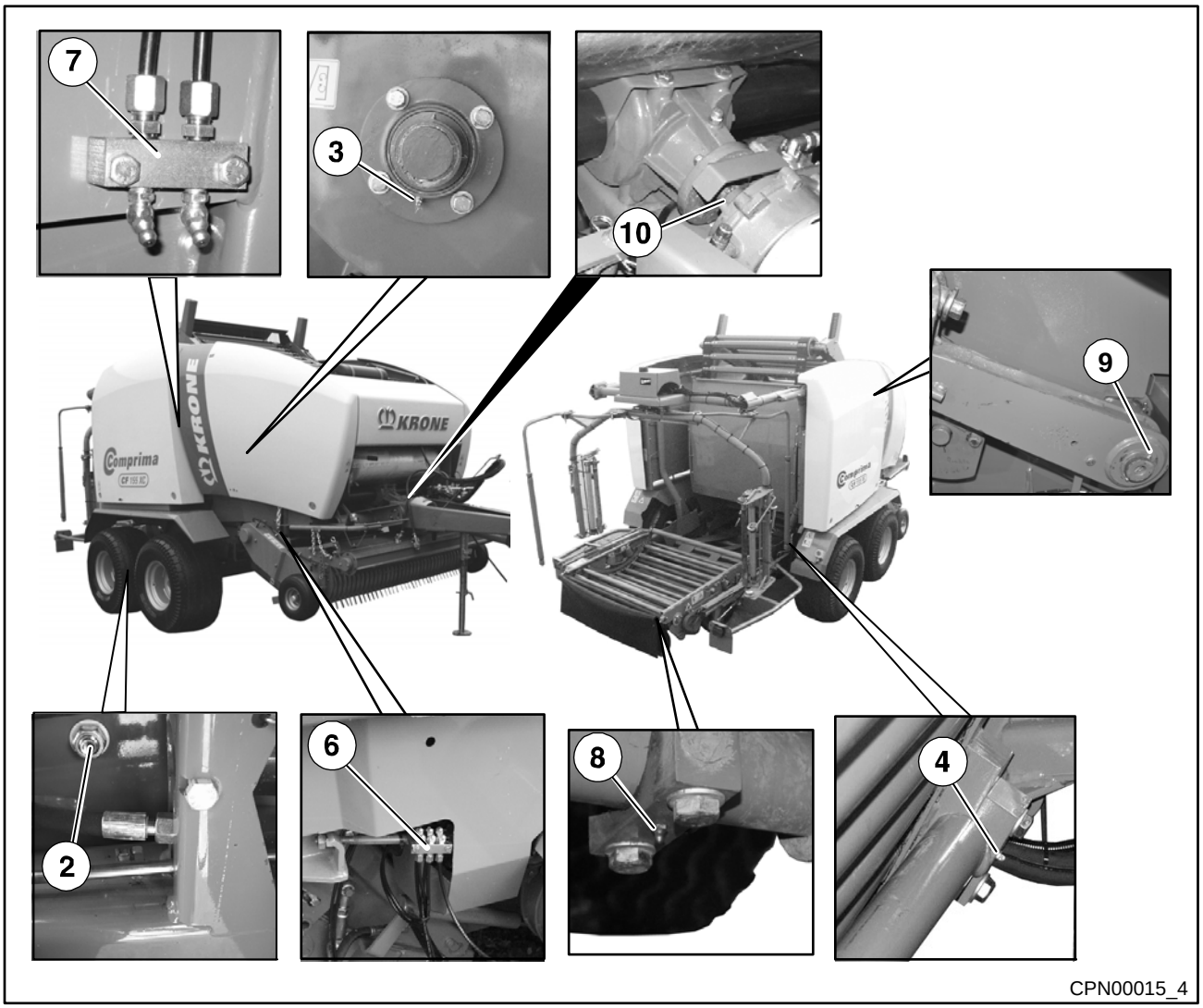


Fig. 264

	Lubrication Points		Number of Grease Nipples	Lubrication Interval
1	Parking jack		1	50 h
2	Tandem axle pendulum arm bearing right/left		2	50 h
3	Bearing wrapping table		1	20 h
4	Cutting roller left		1	20 h
5	Nipple block left:	Floor conveyor at front Lower roller Upper roller	1 1 1	20 h
6	Cylinder swivel table		1	20 h
7	Nipple block right/left:	Rear rocker arm Bearing drive shaft floor conveyor rear (Comprima CV150 /CV210 XC)	1 1	20 h
8	Cylinder bale lifter (only Comprima CF155 XC)		1	20 h
9	Tensioning rocker		1	20 h
10	Connection (sleeve/stub end) between main gearbox and slipon gear		-	20 h

WARNING! – Settings on the machine!
Danger to life or serious injuries.
- The shut-off valve on the left hydraulic cylinder must be closed.

15 Placing in Storage

WARNING!

If the basic safety instructions are not followed, people may be seriously injured or killed.

- To avoid accidents, the basic safety instructions in the chapter Safety must have been read and followed, see chapter Safety "Basic safety instructions".

WARNING!

If the safety routines are not adhered to, people may be seriously injured or killed.

- To avoid accidents, the safety routines in the chapter Safety must be read and followed, see chapter Safety "Safety routines".

15.1 At the End of the Harvest Season

Before placing the machine in winter storage, clean it inside and outside thoroughly. To do this, use a high-pressure cleaner. Do not hold the stream of water directly on the bearing points. After cleaning is completed, lubricate all grease nipples. Do not wipe off any grease that comes out of bearing points. The hardened grease will provide additional protection against moisture.

Check chains and sprocket wheels for wear. Oil and tighten cleaned chains.

Check all movable parts such as deflection rolls, joints, tensioning rolls, etc. to make certain they move easily. If necessary, dismount, clean, grease and remount. If necessary, replace with new parts.

Only use original KRONE spare parts.

Disassemble the universal shaft. Lubricate the inner tubes and the guard tubes with grease. Grease the lubrication nipples on the universal joint and grease the bearing rings of the protective tubes.

Park the machine in a dry location, but not in the vicinity of artificial fertilisers or livestock buildings. Repair places with damaged paint and preserve all bare metal places thoroughly with rust protection agent.

Caution!

The machine should only be placed on blocks with a suitable vehicle lifting device. Make certain that the machine is stable and safe when it is on blocks.

To remove load from the tyres, set the machine on blocks. Protect the tyres against external influences such as oil, grease and direct sunlight, etc.

Perform the necessary repair tasks during the time immediately after the harvest season. Draw up a list of all spare parts you will need. This will make it easier for your KRONE dealer to process your orders and you will be certain that your machine will be ready for use at the beginning of the next season.

15.2 Before the Start of the New Season

DANGER! - During repair, maintenance, cleaning work or technical interventions on the machine, drive elements can start moving.

Effect: Risk of death, injuries or damage to the machine.

- Turn off the tractor engine, remove the ignition key and take it with you.
- Disconnect the 12 V power supply voltage.
- Secure the machine and tractor against rolling.
- Turn off and disengage the PTO shaft
- After repair, maintenance, cleaning work or technical interventions on the machine, replace all protective covers and safety devices correctly.
- Avoid oil, grease, cleaning agents and solvents coming into contact with the skin.
- Hydraulic fluids escaping at high pressure can cause severe injuries. In the event of injuries or burns due to oils, cleaning agents or solvents, contact a physician immediately.
- To prevent injury and accidents, follow all safety instructions.

- Before placing the machine in service again, trigger a tying or wrapping process and run through it manually. As you do, check the functions of the starting devices of the tying or wrapping process.
- Grease all lubrication points and oil the chains. Wipe away grease that comes out of lubrication points.
- Check the oil level in the main drive gearbox and top up if necessary.
- Check hydraulic hoses and lines for leaks and replace them if necessary.
- Check all screws to make certain they are tight or retighten them if necessary.
- Check all electrical connection cables and the lighting. Repair or replace if necessary.
- Check the entire setting of the machine and correct if necessary.
- Check the operating functions.
- Re-read the operating instructions thoroughly.

15.2.1 Maintenance work before the beginning of the new season

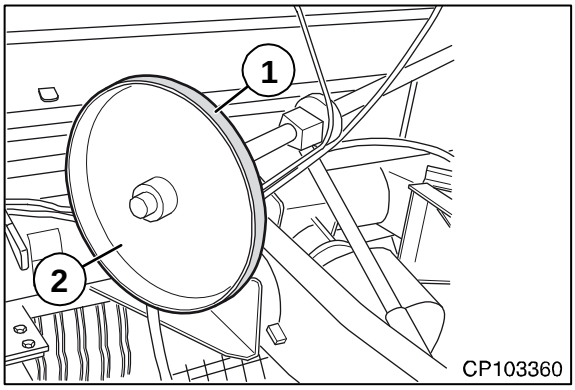


Fig. 265

- Clean the rust off the brake disc (2) on the running surface (1).

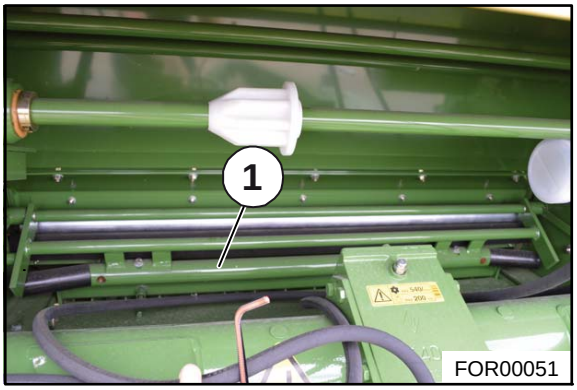


Fig. 266

- Remove the grill on the spreading bracket (1) (for net tying).

15.2.2 Venting the overload coupling on the PTO shaft

Friction clutch only

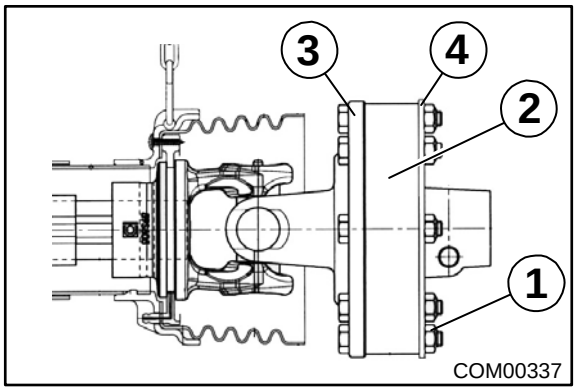


Fig. 267

Following extended downtimes, overload coupling surfaces (2) may stick to the contact surfaces.

Vent the overload coupling before use.

- Loosen the eight screws (1) to release the spring pressure from the outside washers (3, 4).
- Turn the PTO shaft manually.
- Tighten the screws until the covering ring (2) is lying directly against the outside washers (3, 4).

Note

Do not tighten the screws (1) too tight. The coupling must still be able to slip.

- Then turn the screws (1) one sixth of a revolution back.

16 Malfunctions - Causes and Remedies

WARNING!

If the basic safety instructions are not followed, people may be seriously injured or killed.

- To avoid accidents, the basic safety instructions in the chapter Safety must have been read and followed, see chapter Safety "Basic safety instructions".

WARNING!

If the safety routines are not adhered to, people may be seriously injured or killed.

- To avoid accidents, the safety routines in the chapter Safety must be read and followed, see chapter Safety "Safety routines".

16.1 General malfunctions

Malfunction	Possible cause	Remedy
Pick-up cannot be lowered.	Hydraulic hose not plugged in.	Insert hydraulic hose into the appropriate coupling.
Clamping pressure does not build up	Handwheel is in parking position	Screw in handwheel completely
	Screw out handwheel for baling pressure	Set handwheel for baling pressure to the desired pressure
Blockages in the feed area. In case of blockages, stop immediately and turn off the PTO shaft as the floor conveyor strips can be damaged otherwise. Remove blockages.	Swaths are of uneven height or too large.	Split swaths.
	Driving speed too high.	Reduce driving speed. Slow down at the beginning of the baling process until the picked up crop rolls into the bale chamber.
	The machine is not hitched horizontally.	Hinge machine higher at front; adjust drawbar height so that the transition from pick-up to channel is more even.
	The baffle sheet moves upwards.	Remove the spring completely from the baffle sheet.
The transfer of short crop from the pick-up to the cutting roller is inadequate.	The machine is too low at front.	Hinge the machine higher at front, adjust drawbar height so that the transition from pick-up to channel is even.
The floor conveyor takes forage up	The inner bale core is set too tight	Adjust the soft core or reduce the baling pressure.
In case of barrel-shaped bales, the wrapping material tears in the middle.	The bale chamber is not filled evenly.	Drive over the swath on alternate sides.
	The number of wrappings is too small.	Increase number of wrappings.
	Net brake is too tight.	Loosen net brake.
	Net spreader is set too tight.	Adjust spreading device.
	Floor conveyor switches too late	Change switching time.
Bale is formed conically.	The bale chamber is filled on one side.	Make sure when baling that the bale chamber is filled evenly. Slow down especially at the end of the bale.
	Speed is too high at the end of baling process.	Slow down at the end of the baling process.
	Twine or wrapping material torn.	Just use twine or wrapping material in the provided quality.
	The number of wrappings is not sufficient. Wrapping material loosens.	Set the twine tying device to a closer tying distance or increase the number of wrappings of the wrapping material.

Malfunction	Possible cause	Remedy
The net tears off directly after the starting process or during wrapping.	The blade bar has been fallen down again immediately after the starting process.	Remove impurities.
	The roller brake is set too strong.	Check the setting of the brake device.
	Blade bar is too low.	Check the setting of the blade bar.
Net is not transported during the starting process.	The dimensions of the net are incorrect.	Just use net rollers with prescribed dimensions.
	Net rollers are not inserted correctly in the reception device and / or the roller brake device is not set correctly.	Insert net roller according to the operating instructions, set roller brake.
	Net has not been inserted correctly in the wrapping device.	Pull the net out of the wrapping device and insert it again according to the operating instructions.
The left-right display is too sensitive.	In case of Comprima CF155:The spring tubes on the belt tensioning device are running too sluggishly (see Chapter entitled “Setting the Bale Diameter”)	Lubricate the inner tube.
Net is not cut off neatly.	Blade bar does not fall completely down.	Remove impurities.
	Dull blades	Change blades
	Ratchet mechanism does not come up	Readjust cable
The net does not reach the outside edges of the bale.	Net is not decelerated correctly during wrapping process.	Check the setting of the brake device.
	Net has got caught on the cutting blades.	Check setting of cutting blades.
	Starter rollers of film wrapping device are bent.	Check wrapping device and replace it, if necessary.
	Crop between spiral roller and scraper	Readjust scraper.
	Net spreader does not work.	Rotate the net spreader.
	The scraper of cutting roller or conveyor roller is blocked.	Change once again the side in the swath before net is inserted.
Tailgate cannot be opened correctly.	Hydraulic hose not plugged in.	Insert hydraulic hose into the appropriate coupling.
The tailgate cannot be closed.	Sand, stones etc. have accumulated on the collection plate.	Install the cover sheet of the collection plate by one bore hole to the rear.
The bale does not roll or rolls just slowly out of the bale chamber.	The sides are filled too much or the baling pressure is too high.	Do not drive sideways too far.
The floor conveyor takes forage up at front.	Material is too brittle (for example straw)	a) Remove blade. b) Reduce baling pressure.

Malfunction	Possible cause	Remedy
Slip of floor conveyor Belt slips	Very heavy grass without structure (for example clover grass)	In case of slip of floor conveyor, drive with less blades or turn blades off or remove them or reduce the baling pressure.
		The inner bale core must only be set to soft for Comprima CV150 (refer to chapter “Adapting Soft Core”).
		In case of Comprima CV150, a second drive can additionally be installed. It can be ordered via spare parts number: 200636500
Machine does not run smoothly. The bale start is difficult.	The setting of the inner bale core is too tight	Ensure a softer setting of inner bale core (refer to chapter “Adapting Soft Core”). Reduce baling pressure.

16.2 Malfunctions on the central chain lubrication system

Malfunction	Possible cause	Remedy
Low oil consumption	Low pressure	Pump works with difficulty, dirt in the pump area • Clean Pump is not pressed to a full stroke • Adjust according to the operating instructions Pump valve does not close correctly • Remove and clean or replace
	Oil is too thick	• Replace with recommended oil
	System contaminated	• Clean or replace all measuring valves
Oil consumption too high	Main pipe torn	• Repair or replace
	Oil too thin	• Drive with thicker oil • Reduce the pump stroke
Machine is dry	No pressure	Pump not running • Repair, adjust or replace Main pipe torn • Repair or replace System has no oil • Vent the system (see chapter Central chain lubrication system)
	System blocked	Dirt • Clean the system and clean or replace all measuring valves. Pipe jammed • Repair or replace
Pump is not pressed to a full stroke.	Oil is too thick, nozzles clogged.	• Replace with recommended oil • Clean nozzles

16.3 Malfunctions on the Wrapping Mechanism

Malfunction	Possible cause	Remedy
Sheet blisters	Brake force is too low	Check spring pretensioning on the wrapping arm
	Pre-stretch too high	Change pre-stretch
Wrapping process does not start	Signal wires on the swivel table bent	Adjust signal wires
Sheet has been cut off to early	Blades has been set too aggressive	Set blades less aggressive
Sheet is not cutted	Blade dull	Grind blades
Tailgate does not close	Shut-off valve closed	Open the shut-off valve
Hydraulic oil gets too hot	Filter blocked	Replace the filter insert
	Oil quantity too low	Check oil level
Sheet tears	Stretch rollers too rough	Smooth stretch rollers with emery cloth
	Additional brake too tight	Adjust brake

16.4 Error Messages of KRONE Operation Terminal

The error messages in the display are described in the chapter “KRONE ISOBUS Terminal”.

17 Disposal of the machine

17.1 Disposal of the machine

After the service life of the machine has expired, the individual components of the machine must be disposed of properly. The applicable country-specific, current waste disposal guidelines and the legal laws must be observed.

Metal parts

All metal parts must be brought to a metal recycling centre.

The components must be freed from operating fluids and lubricants (gear oil, oil from hydraulic system, ...) before being scrapped.

The operating fluids and lubricants must be brought separately to an environmentally friendly disposal point or recycling centre.

Operating fluids and lubricants

Operating fluids and lubricants (diesel fuel, coolant, gear oil, oil from hydraulic system, ...) must be brought to a disposal point for waste oil.

Synthetic materials

All synthetic materials must be brought to a recycling centre for synthetic materials.

Rubber

Rubber parts (hoses, tyres, …) must be brought to a rubber recycling centre.

Electronic scrap

Electronic parts must be brought to a disposal point for electronic scrap.

18 Appendix

18.1 Hydraulic System Circuit Diagrams

Comprima CF 155 XC

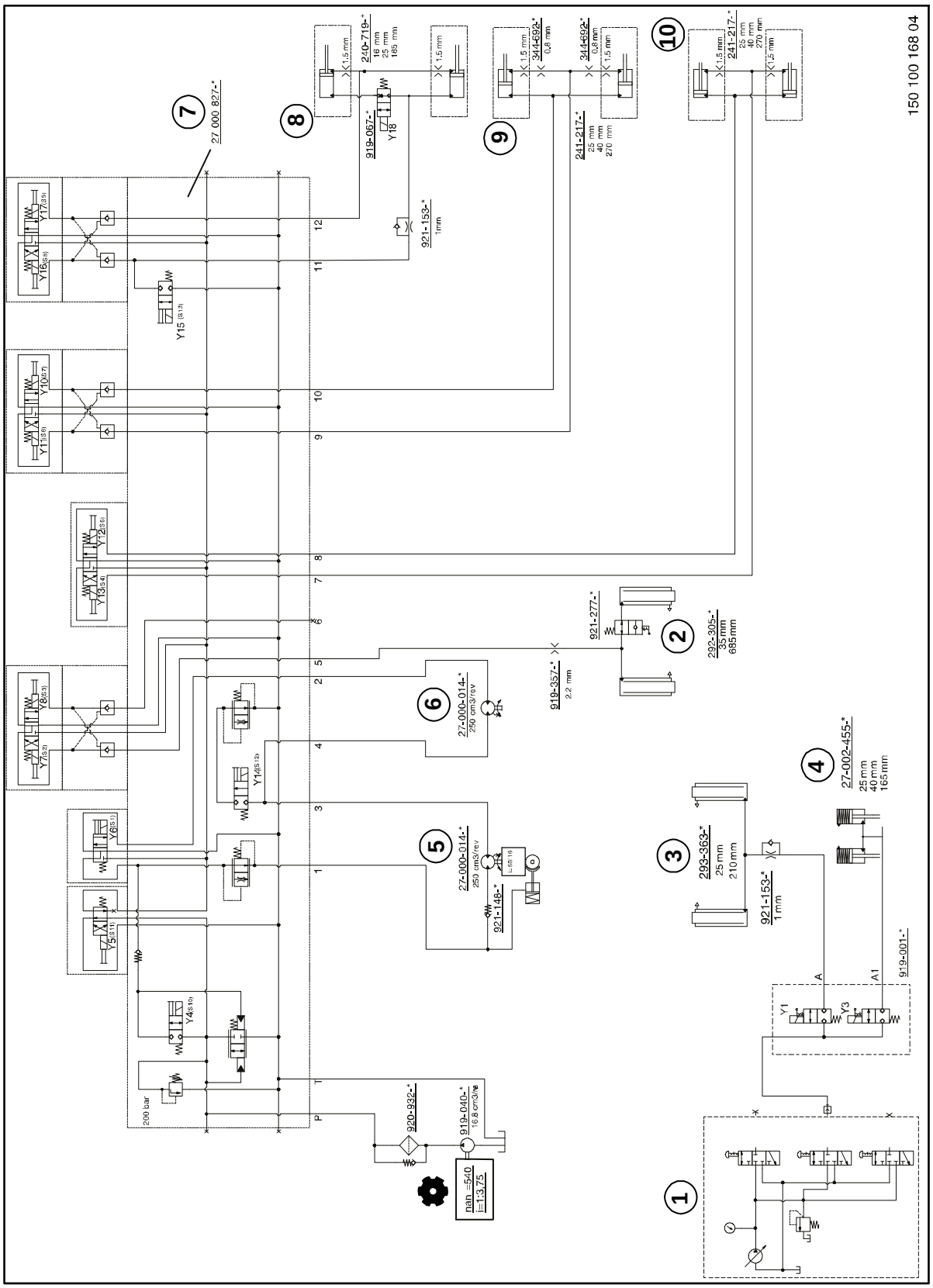


Fig. 268

1	Tractor	2	Tailgate
3	Pick-up	4	Hydr. blade base lowering
5	Wrapping arm	6	Chain swivel table
7	Valve block	8	Holding arms
9	Tilt swivel table	10	Bale transfer

Comprima CV 150 XC

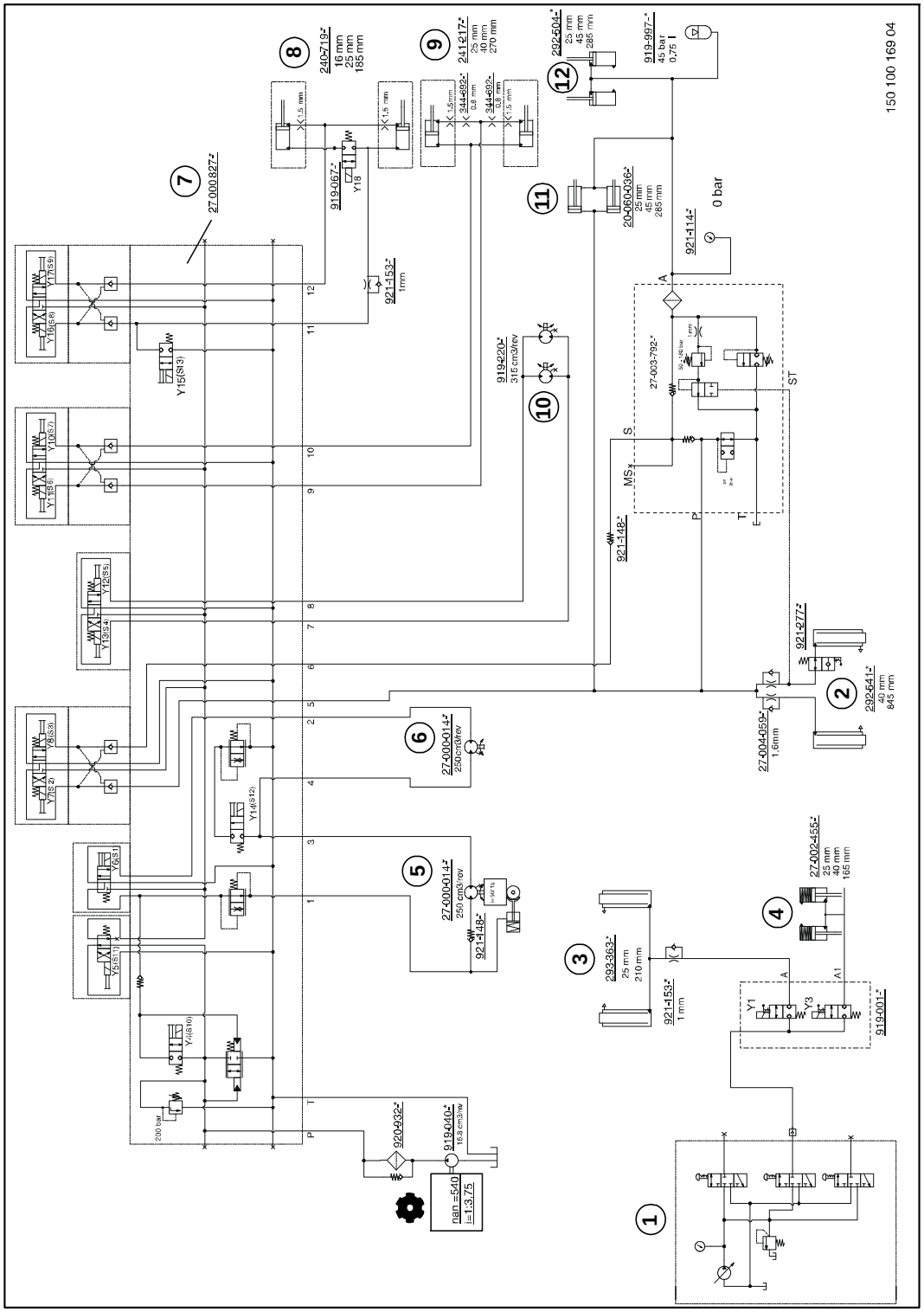


Fig. 269

1	Tractor	2	Tailgate
3	Pick-up	4	Hydr. blade base lowering
5	Wrapping arm	6	Chain swivel table
7	Valve block	8	Holding arms
9	Tilt swivel table	10	Bale transfer
11	Front clamping arms	12	Rear clamping arms

Comprima CV 210 XC

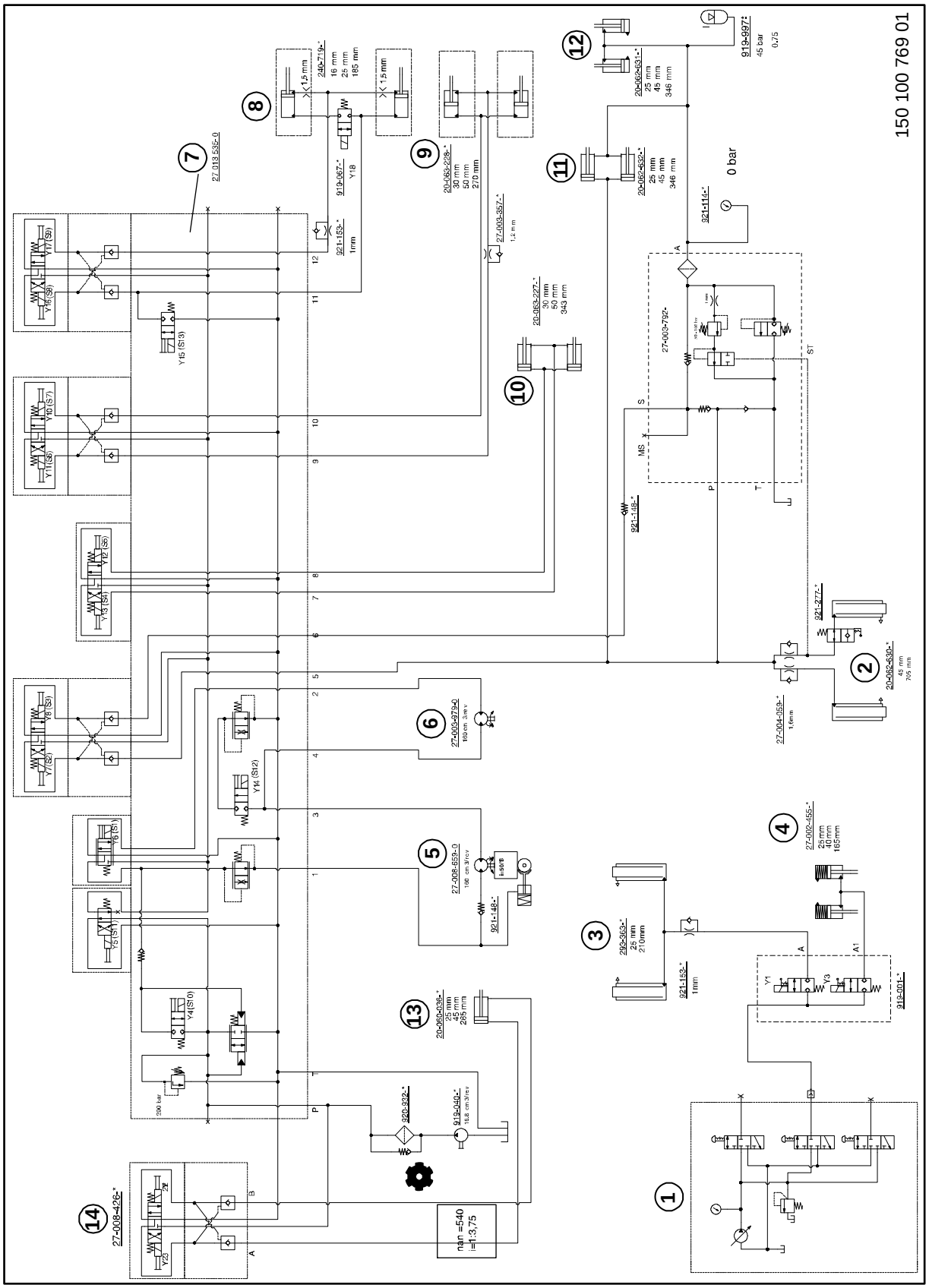


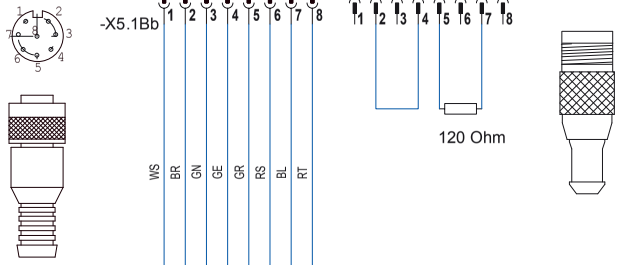
Fig. 270

1	Tractor	2	Tailgate
3	Pick-up	4	Hydr. blade base lowering
5	Wrapping arm	6	Chain swivel table
7	Valve block	8	Holding arms
9	Tilt swivel table	10	Bale transfer
11	Front clamping arms	12	Rear clamping arms
13	Height adjustment for wrapping arm	14	Additional valve block for CV 210 XC

18.2 Electrical circuit diagram

-2
ISO bus-terminal CCI 100
8,4 " TFT
640 x 480

CAN-1 IN	CAN-1 OUT	(CAN-2 IN)	Video	Signal	RS232 I	RS232 II	(WLAN)	LIN	(Ethernet)
+12V/+24V supply	+12V/+24V supply		+12V/+24V supply	&Einschaltsignal;	+12V/+24V supply	+12V/+24V supply		+12V/+24V supply	
&Not-Stop; A	&Not-Stop; B		RS485B	FQ2	TXD	TXD		TXD	
&Einschaltsignal;	&Einschaltsignal;		RS485A	GND	GND	GND		GND	
&Not-Stop; supply	&Not-Stop; supply		&Einschaltsignal;	FQ1	&RxD;	&RxD;		&RxD;	
CAN1-L	CAN1-L		RS485A	analog-input					
GND	GND		&Einschaltsignal;						
CAN1-H	CAN1-H		GND						
&Schirm;	&Schirm;		&Schirm;						



-X5.1a
-X5.1b

CAN_H_1_1X1/5 /3.A3
GND_Term_1X1/27 /3.A2
CAN_L_1_1X1/6 /3.A3
SS5V_1X1/9 /3.A1
12VFU_1X1/14 /3.A1

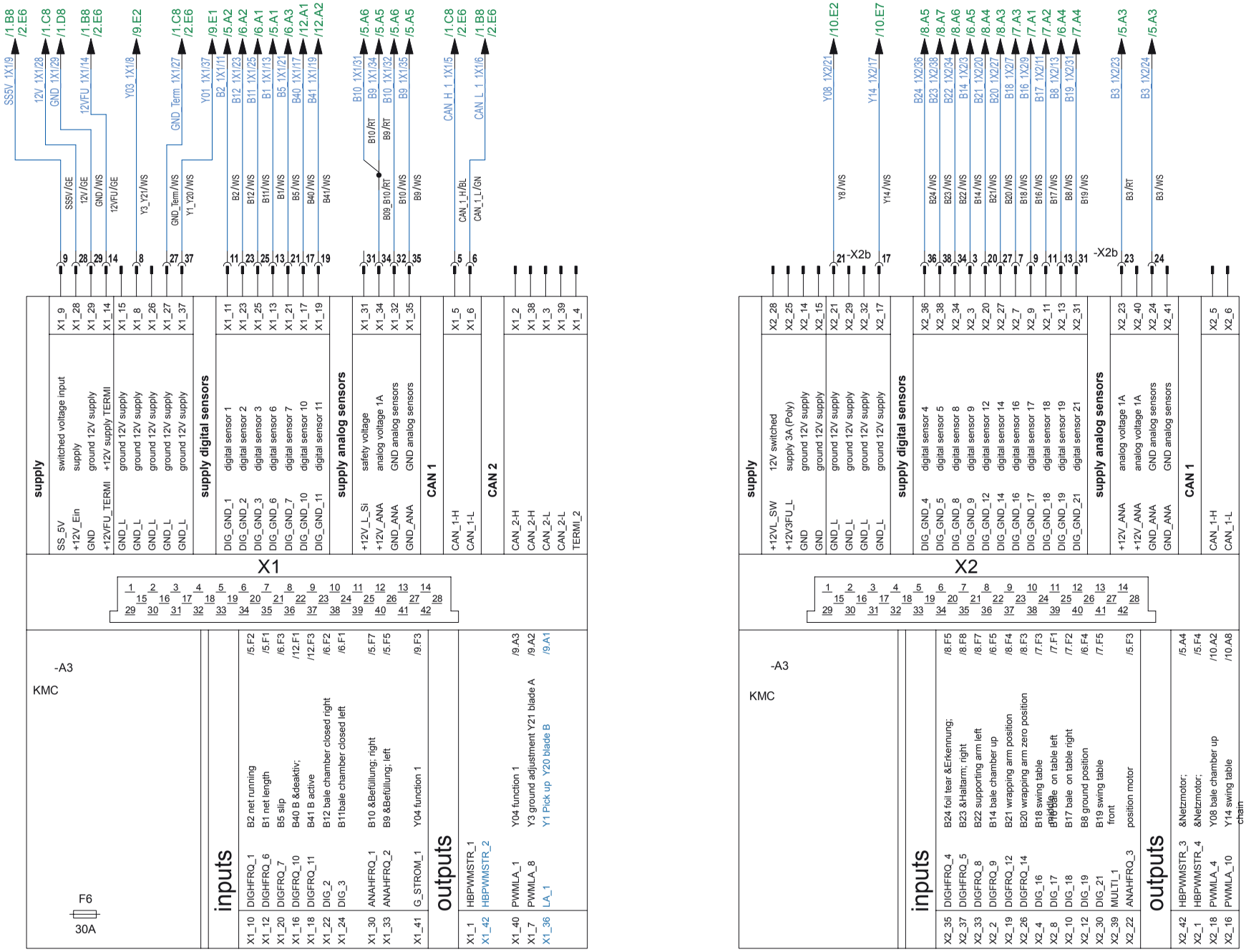
change	date	name	Proved		Origin	Repl. f.	Repl. by
C				Created			
B				date			
A				User	Albers		

KRONE

document-no.: D24
150100369 - 03

CF 155 XC / CV 150 XC
CCI Terminal

plant
location
sheet 2
from Sh.



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B				date	2.09.2009			plant
A				User	Albers			location
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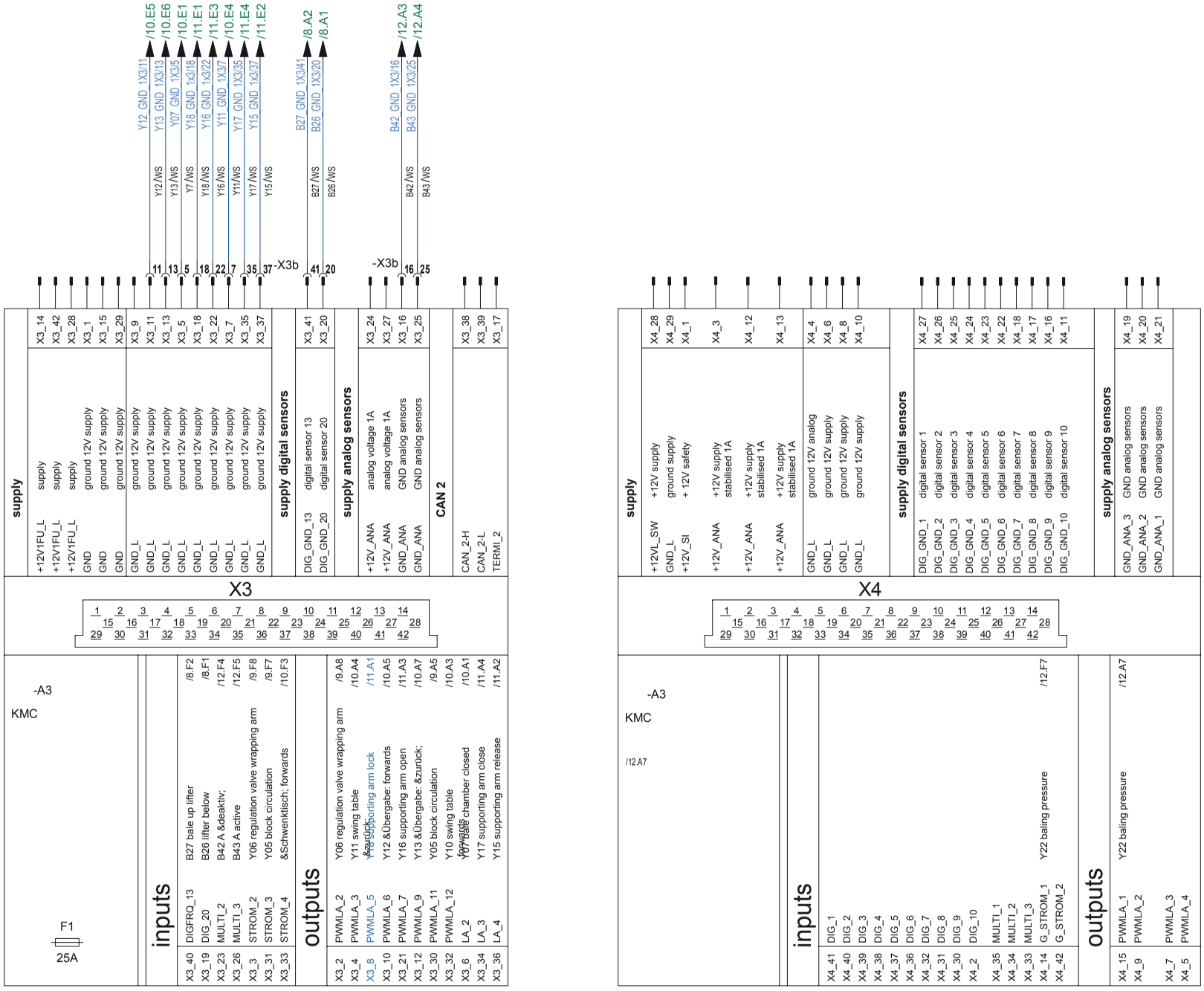

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A			User	Albers			

KRONE

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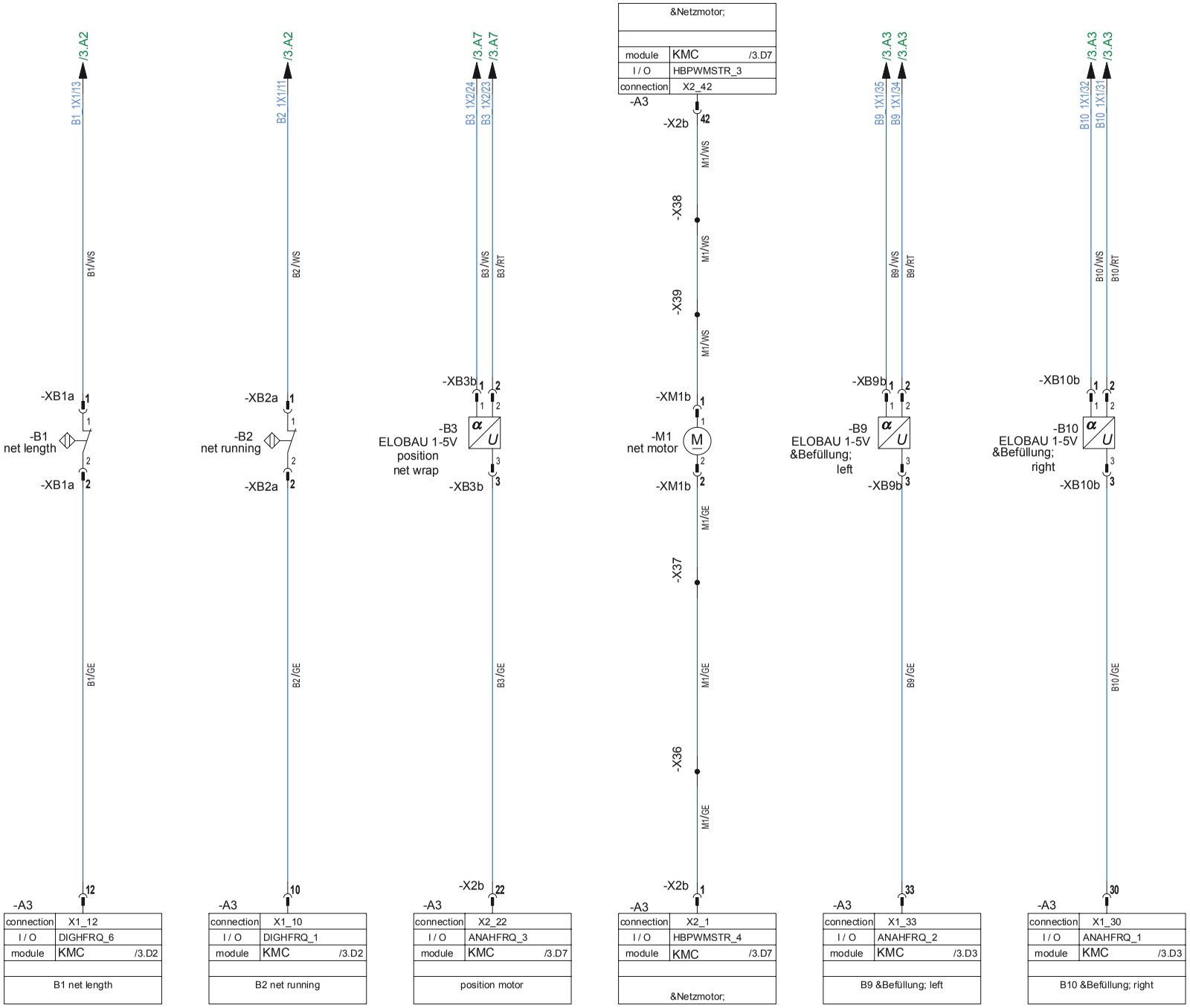
150100369 - 03

CF 155 XC / CV 150 XC
job computer connector X3

plant	
location	
sheet	4
from	Sh.



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B				date	2.09.2009
A				User	Albers
change	date	name	Proved		

KRONE

Origin	Repl. f.	Repl. by

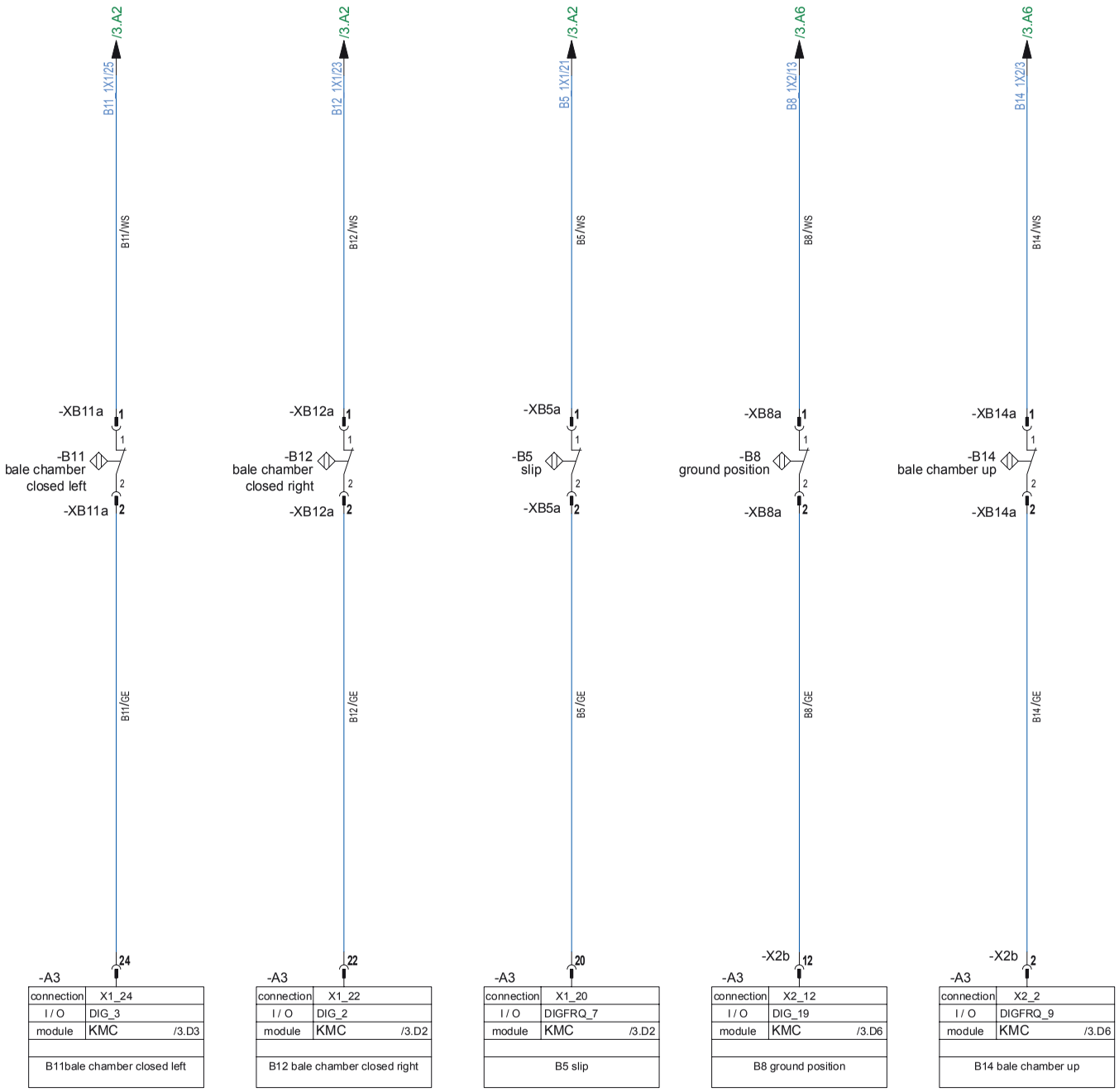
document-no.: D24
150100369 - 03

CF 155 XC / CV 150 XC

sensors baler

1

plant	
location	
sheet	5
from	Sh.



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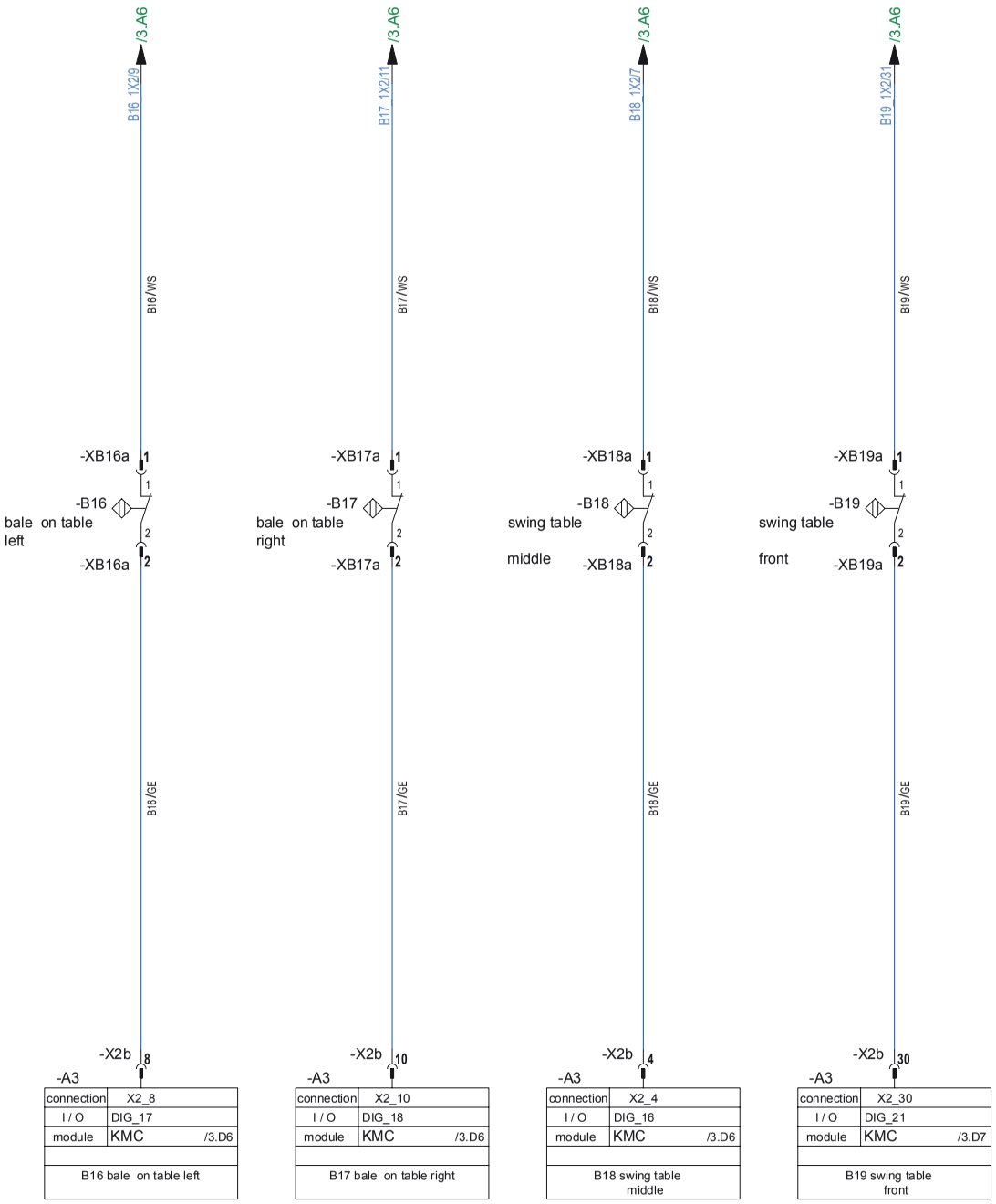
B				date 2.09.2009			
A				User Albers			

KRONE

document-no.: D24
150100369 - 03

CF 155 XC / CV 150 XC
sensors baler
2

plant	
location	
sheet	6
from	Sh.



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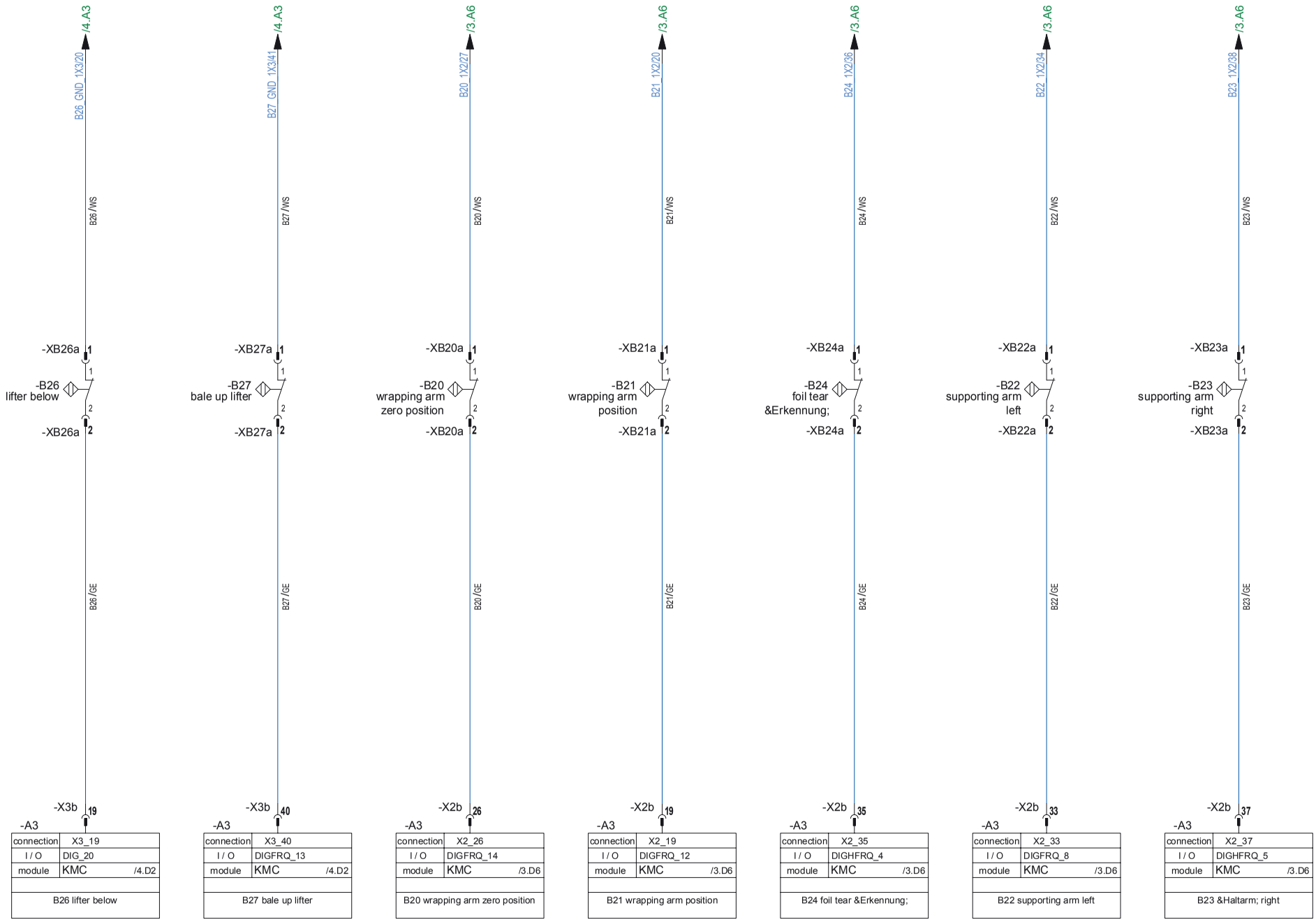
B			date	2.09.2009			
A			User	Albers			

KRONE

document-no.: D24
150100369 - 03

CF 155 XC / CV 150 XC
sensors wrapping mechanism 1

plant
location
sheet 7
from Sh.



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C			Created
B		date	2.09.2009
A		User	Albers
		Proved	

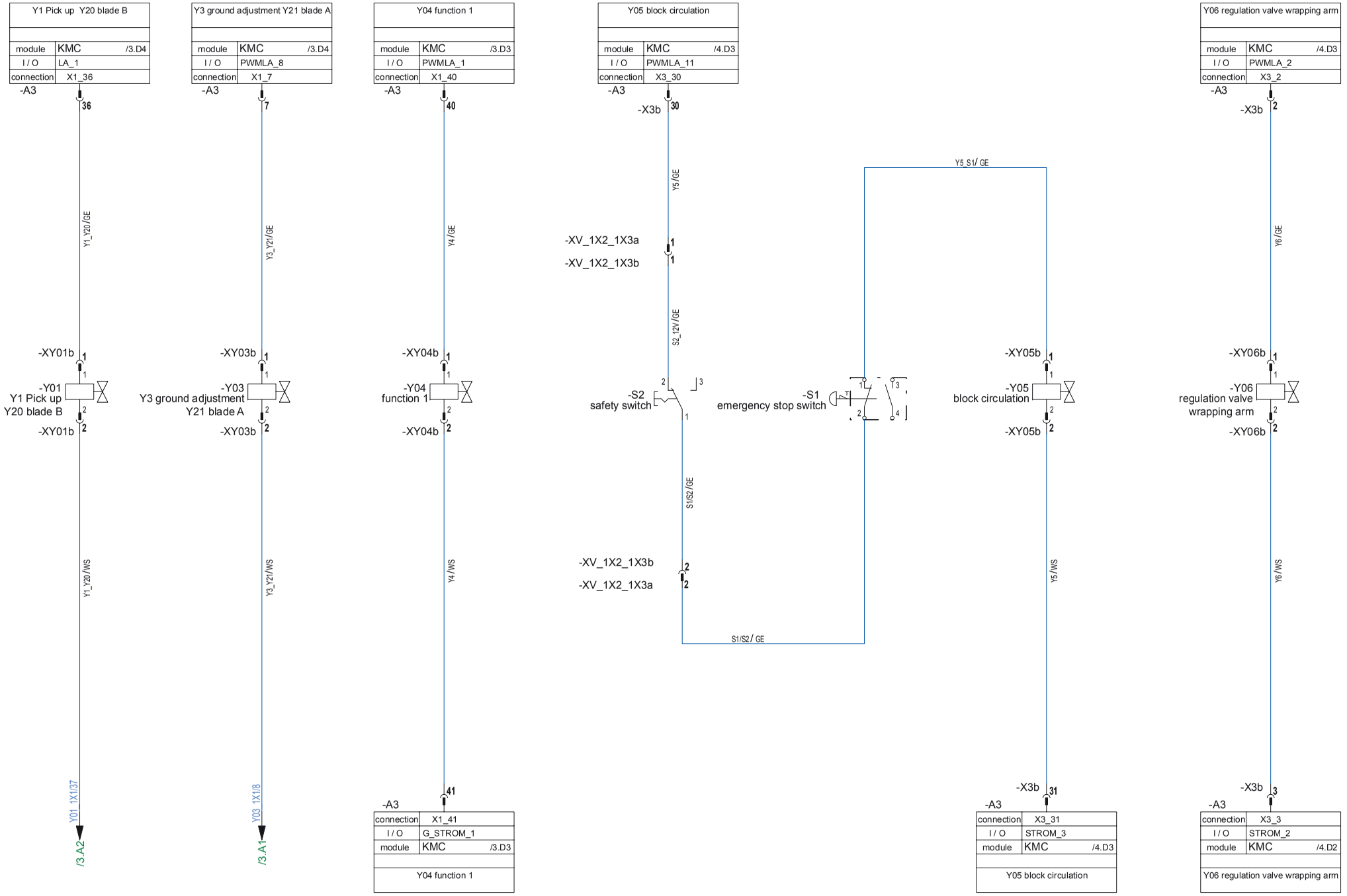
KRONE

Origin	Repl. f.	Repl. by

document-no.: D24
150100369 - 03

CF 155 XC / CV 150 XC
sensors wrapping mechanism 2

plant	
location	
sheet	8
from	Sh.



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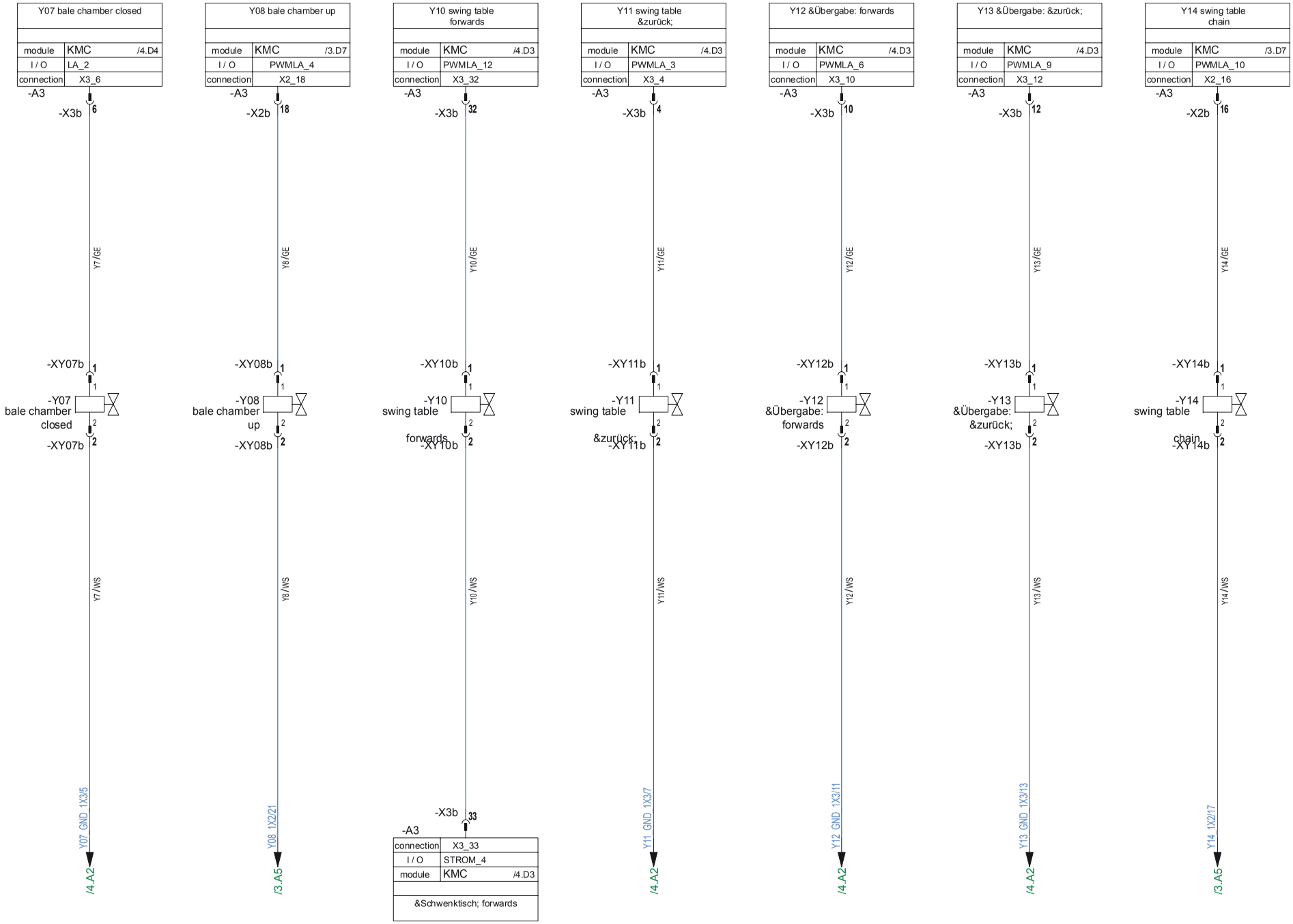
C				Created
B			date	2.09.2009
A			User	Albers
Origin		Repl. f.		Repl. by

KRONE

document-no.: D24
150100369 - 03

CF 155 XC / CV 150 XC
actuators 1

plant
location
sheet 9
from Sh.



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B				date	2.09.2009				location
A				User	Albers				sheet 10
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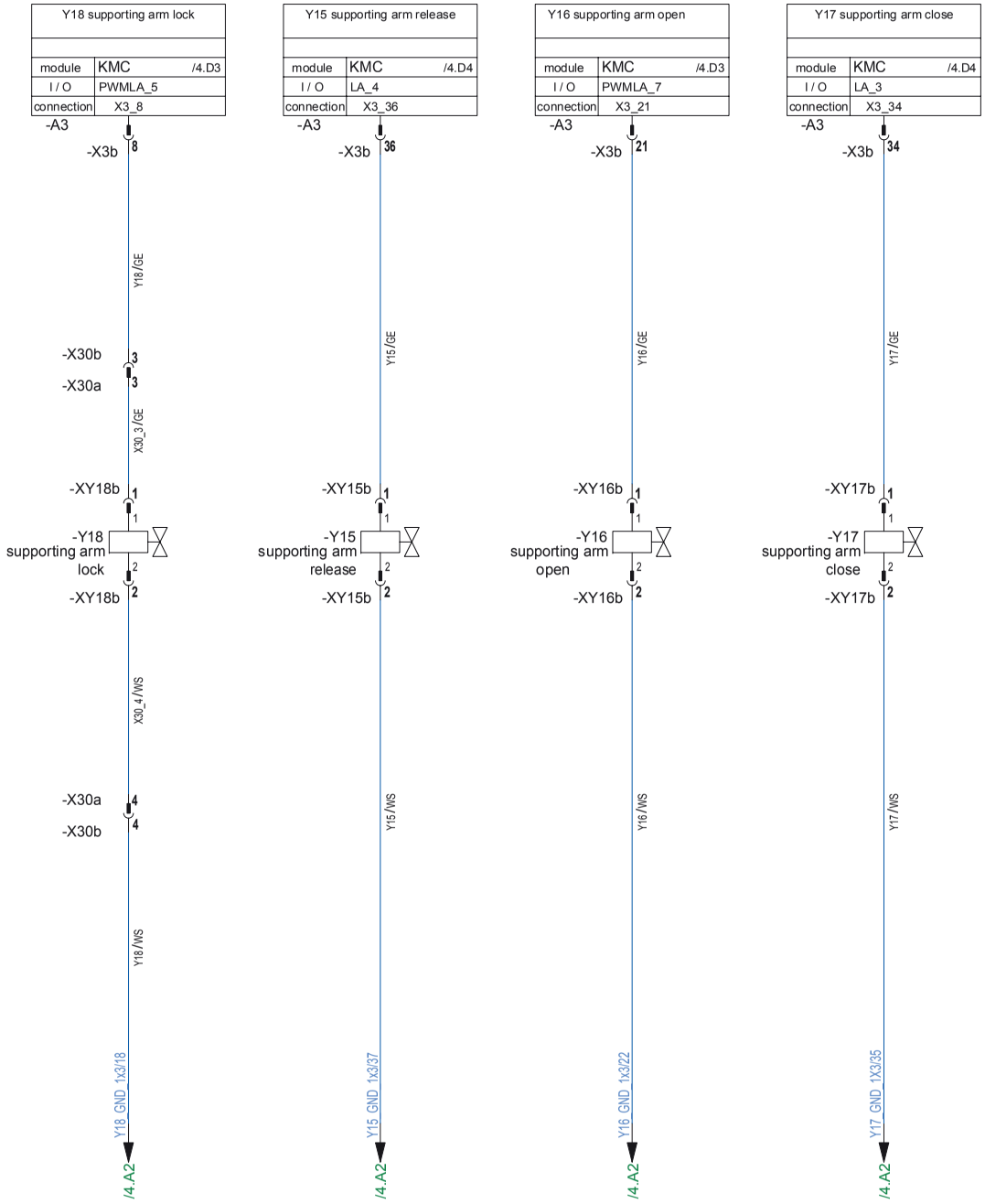

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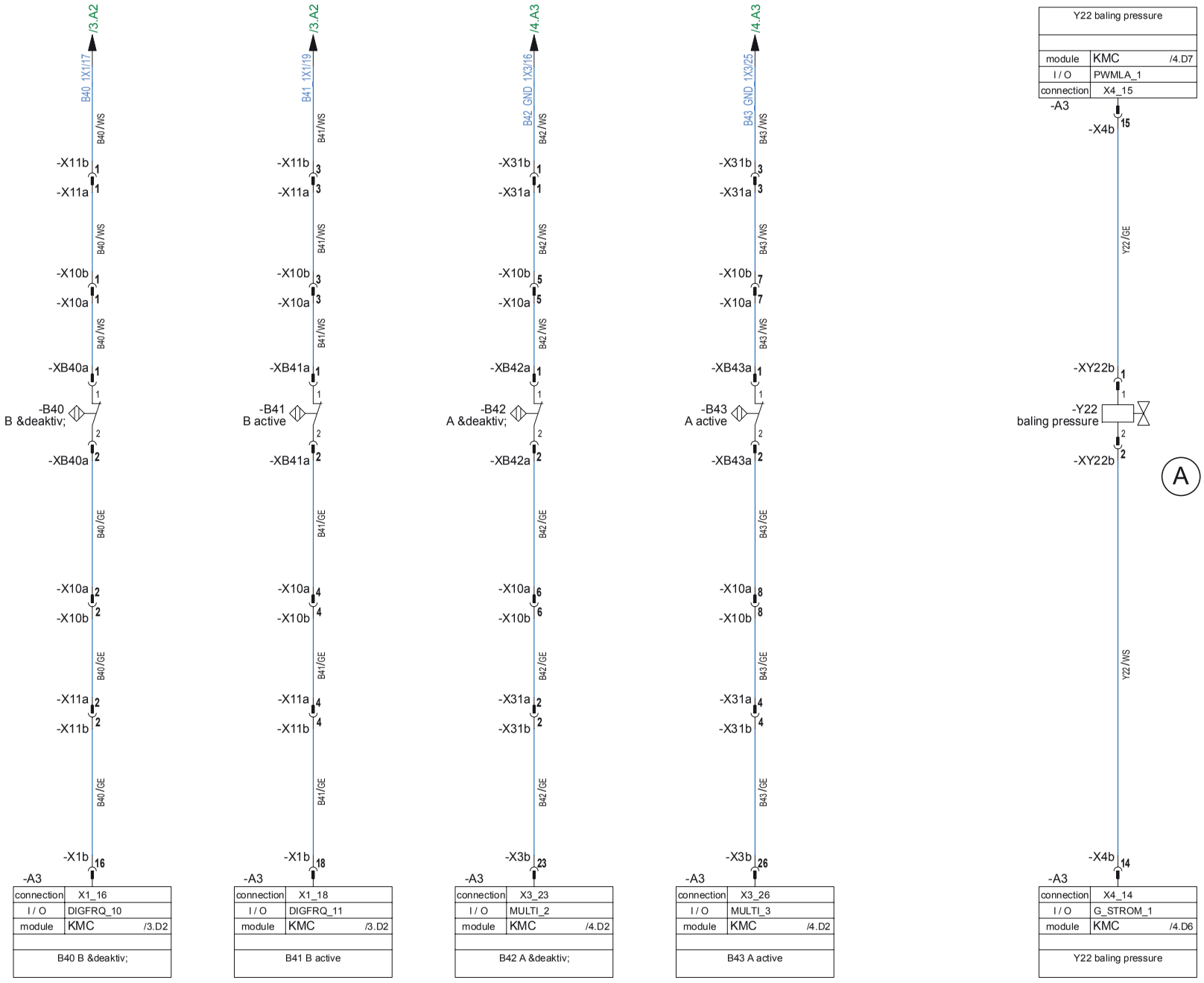

> year of manufacture 2011

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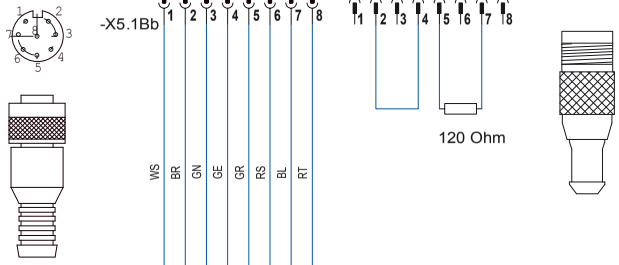
B				date					location
A	Y22 baling pressure	08.07.2011	Albers	User	Albers				sheet 12
	new change	date	name	Proved		Origin	Repl. f.	Repl. by	from Sh.

-2
ISO bus-terminal CCI 100
8,4 " TFT
640 x 480

CAN-1 IN	CAN-1 OUT	(CAN-2 IN)	Video	Signal	RS232 I	RS232 II	(WLAN)	LIN	(Ethernet)
+12V/+24V supply	+12V/+24V supply		+12V/+24V supply	&Einschaltsignal;	+12V/+24V supply	+12V/+24V supply		+12V/+24V supply	
&Not-Stop; A	&Not-Stop; B		RS485B	FQ2	TXD	TXD		TXD	
&Einschaltsignal;	&Einschaltsignal;		RS485A	GND	GND	GND		GND	
&Not-Stop; supply	&Not-Stop; supply		&Einschaltsignal;	FQ1	&RxD;	&RxD;		&RxD;	
CAN1-L	CAN1-L		RS485A	analog-input					
GND	GND		&Einschaltsignal;						
CAN1-H	CAN1-H		GND						
&Schirm;	&Schirm;		&Schirm;						



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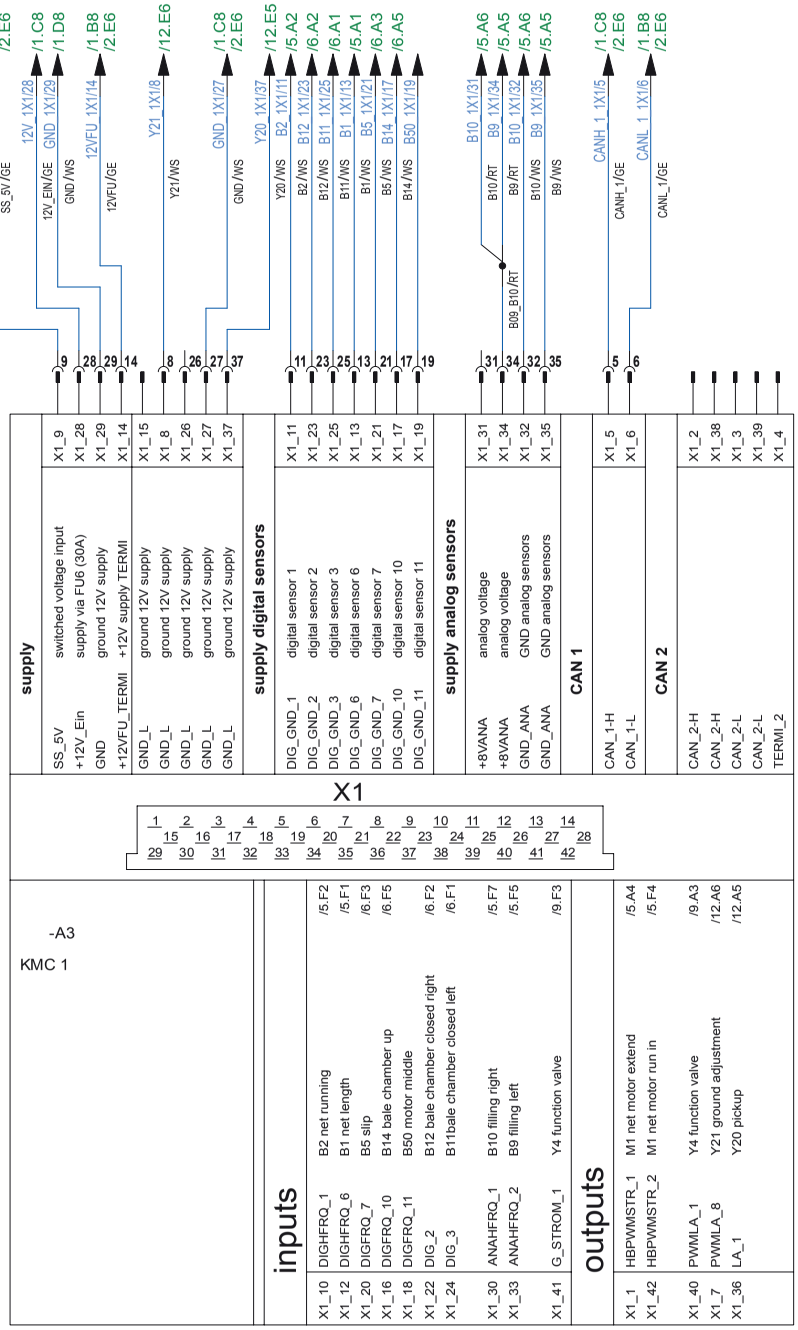
C				Created			
B			date	23.05.2011			
A			User	Albers			

KRONE

document-no.: D24
150100621 - 01

CV 210 XC
CCI Terminal

plant
location
sheet 2
from Sh.



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C				Created			
B			date	23.05.2011			
A			User	Albers			

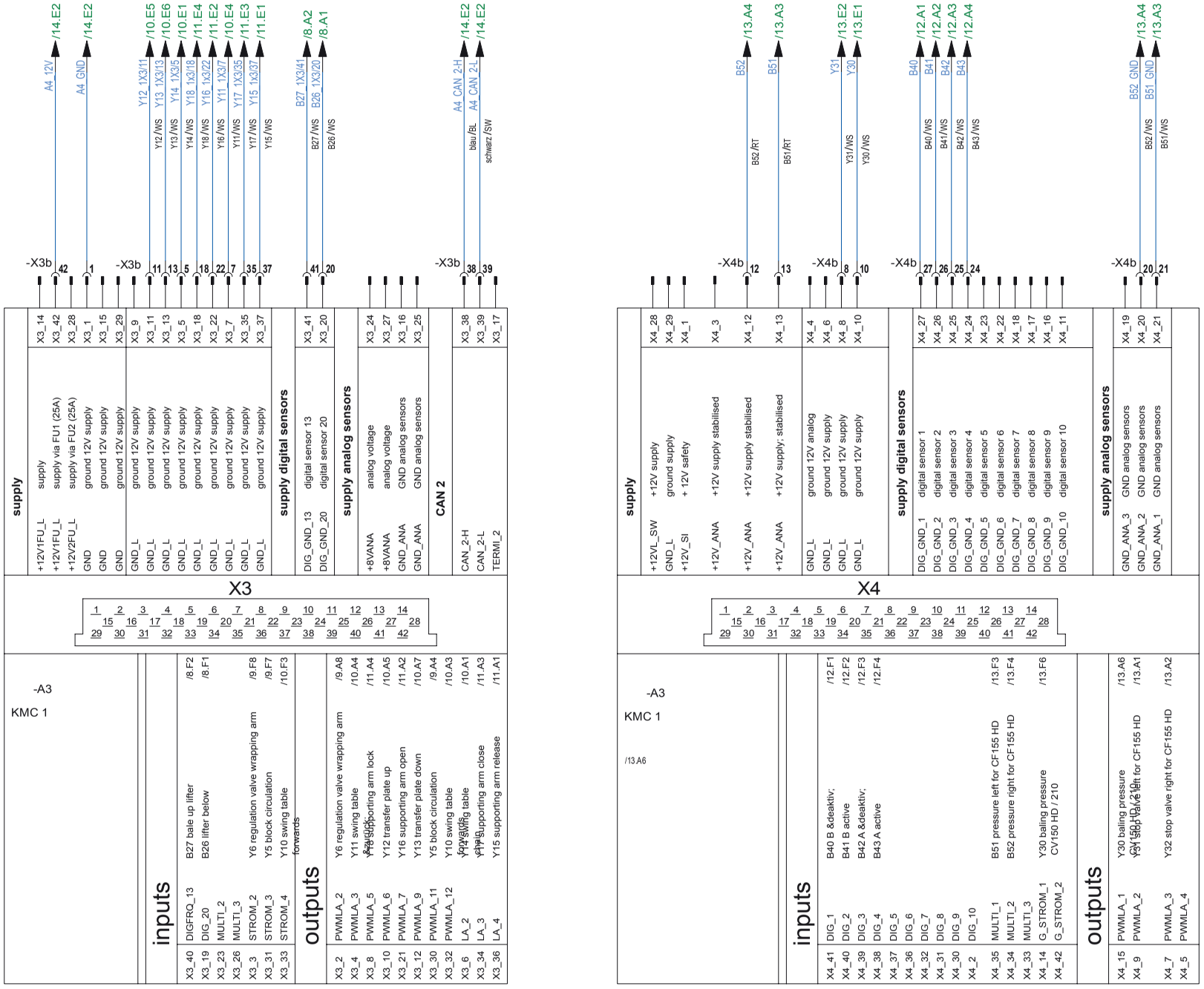
KRONE

document-no.: D24
150100621 - 01

CV 210 XC
job computer connector X1, X2

plant	
location	
sheet	3
from	Sh.

Messkraftverstärker
42 = +12V
1= GND
38=CAN_2_H
39=CAN_2_L



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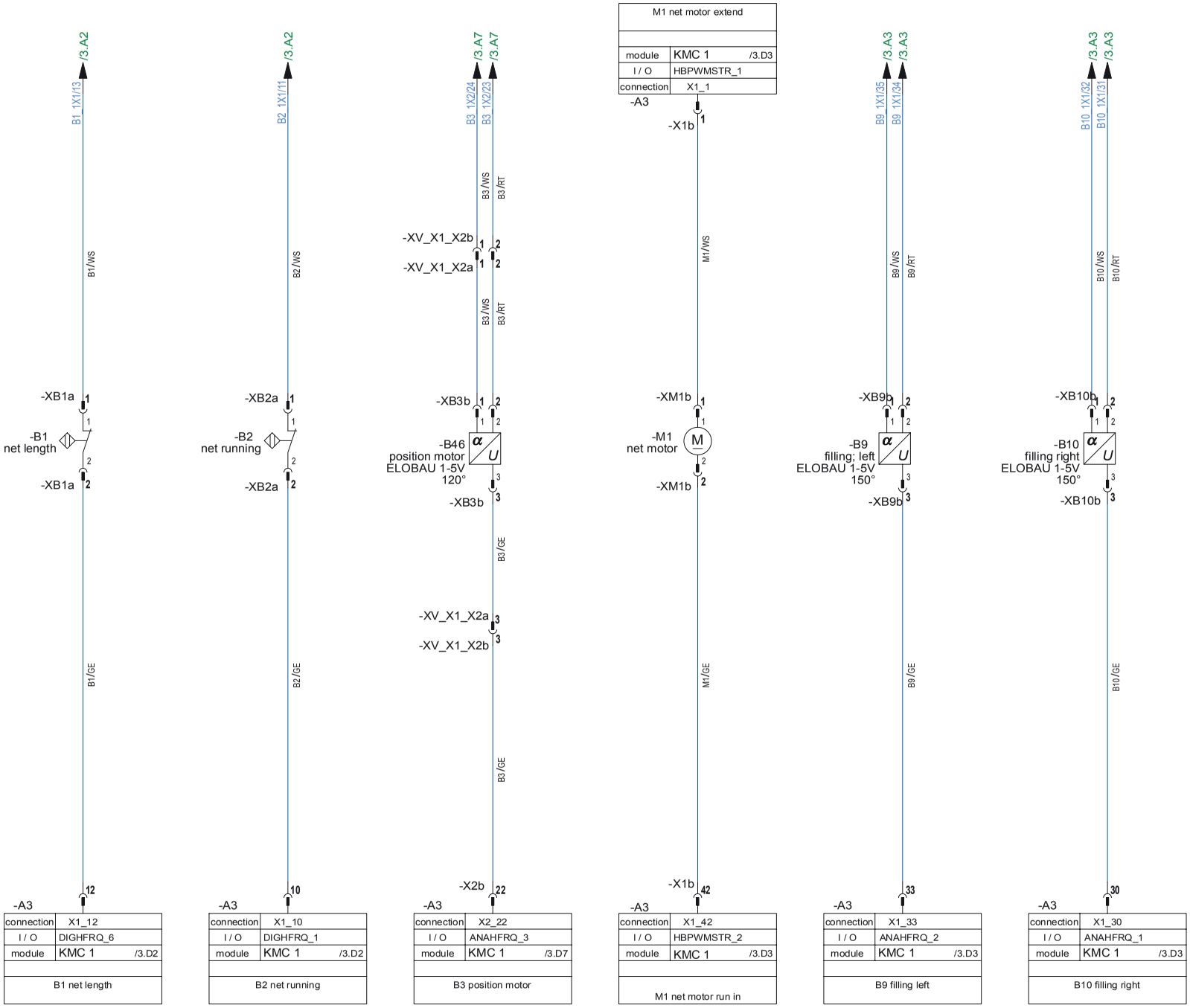
A			User	Albers			

KRONE

document-no.: D24
150100621 - 01

CV 210 XC
job computer connector X3, X4

plant
location
sheet 4
from Sh.



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A			User	Albers	
change	date	name	Proved		

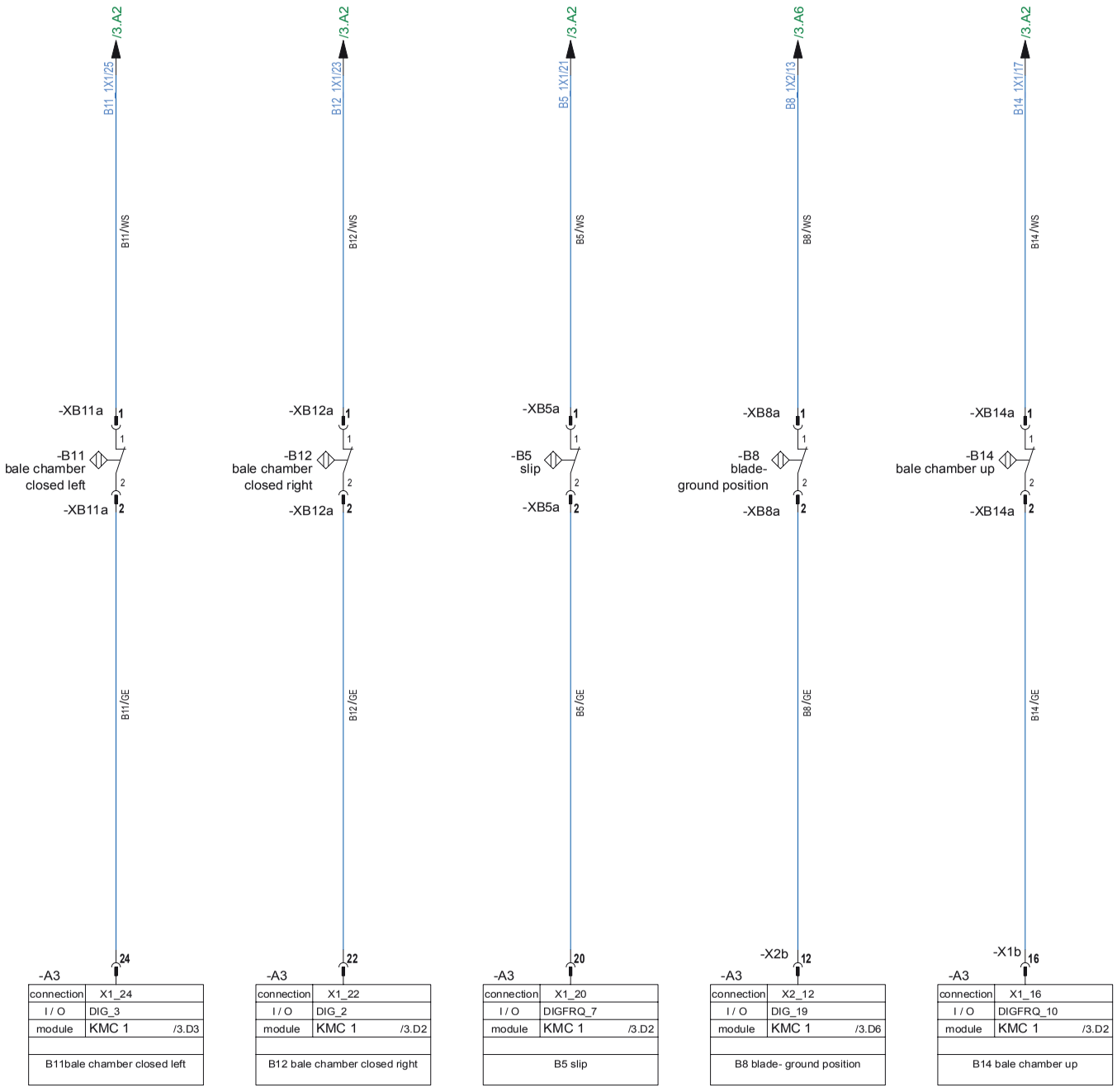
KRONE

Origin	Repl. f.	Repl. by

document-no.: D24
150100621 - 01

CV 210 XC
sensors baler
1

plant	
location	
sheet	5
from	Sh.



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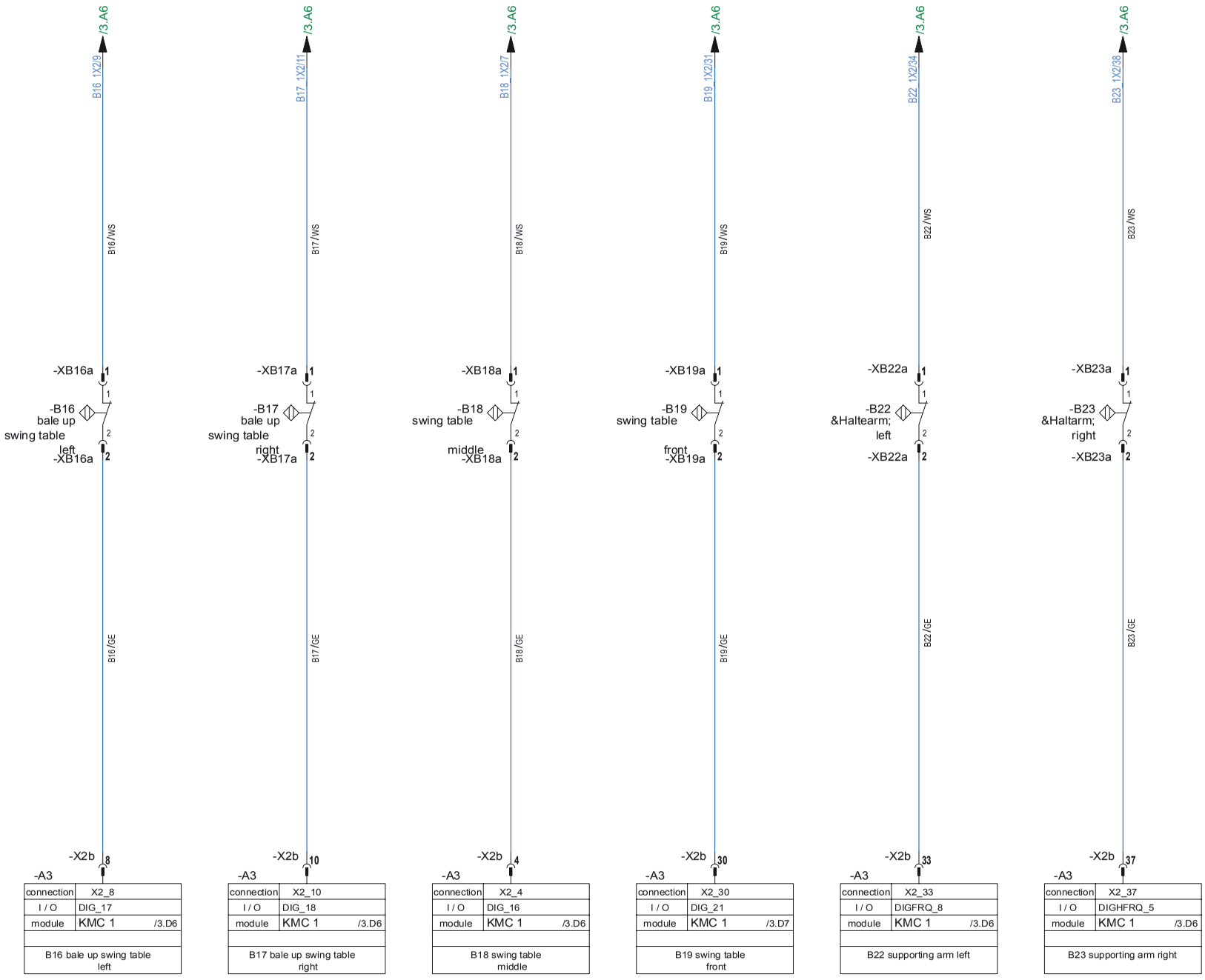
C				Created			
B			date	23.05.2011			
A			User	Albers			

KRONE

document-no.: D24
150100621 - 01

CV 210 XC
sensors baler
2

plant
location
sheet 6
from Sh.



change	date	name	
C			Created
B		date	23.05.2011
A		User	Albers
		Proved	

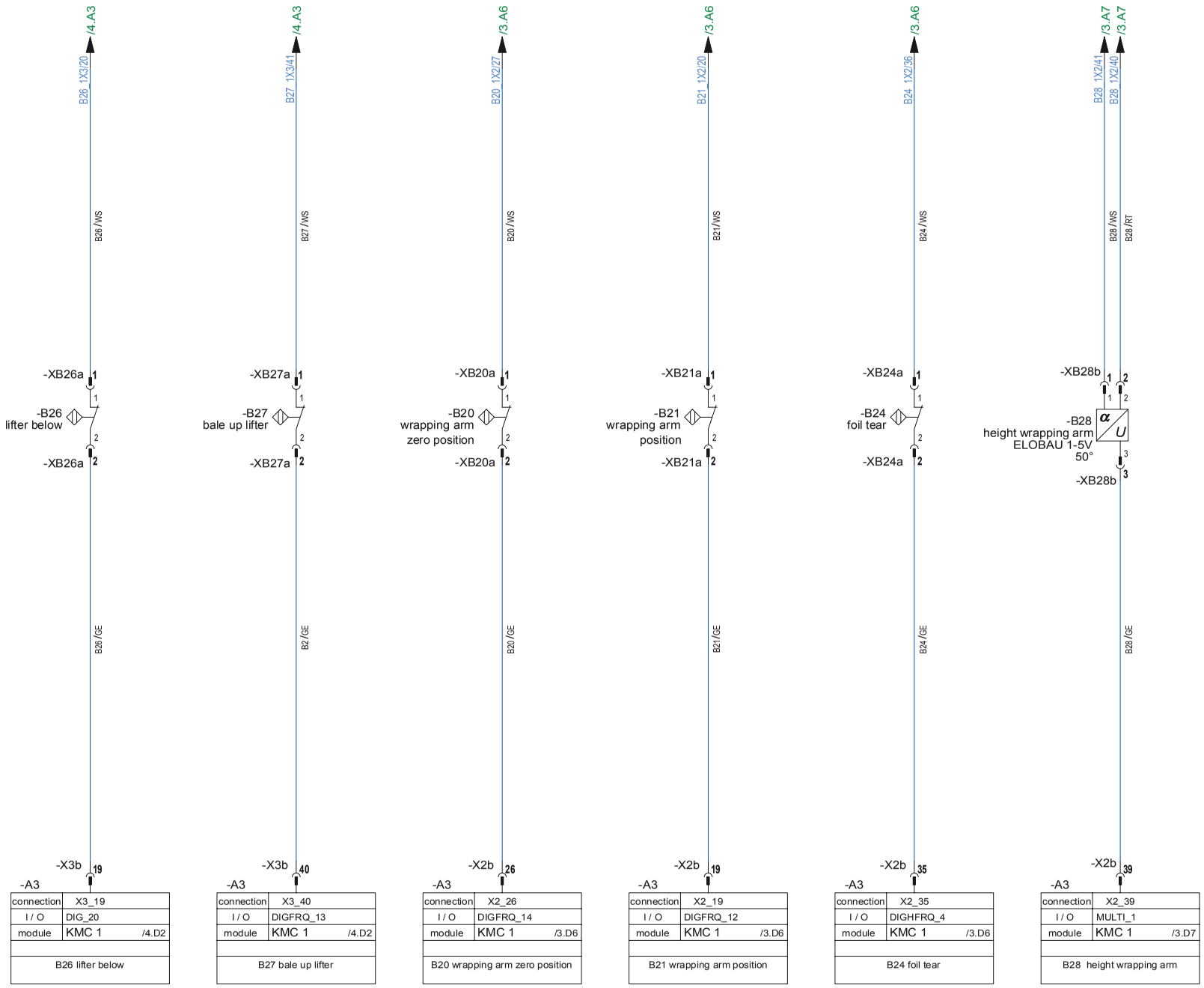
KRONE

Origin | Repl. f. | Repl. by

document-no.: D24
150100621 - 01

CV 210 XC
sensors &Wickler; 1

plant
location
sheet 7
from Sh.



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B			date	23.05.2011
A			User	Albers
			Proved	

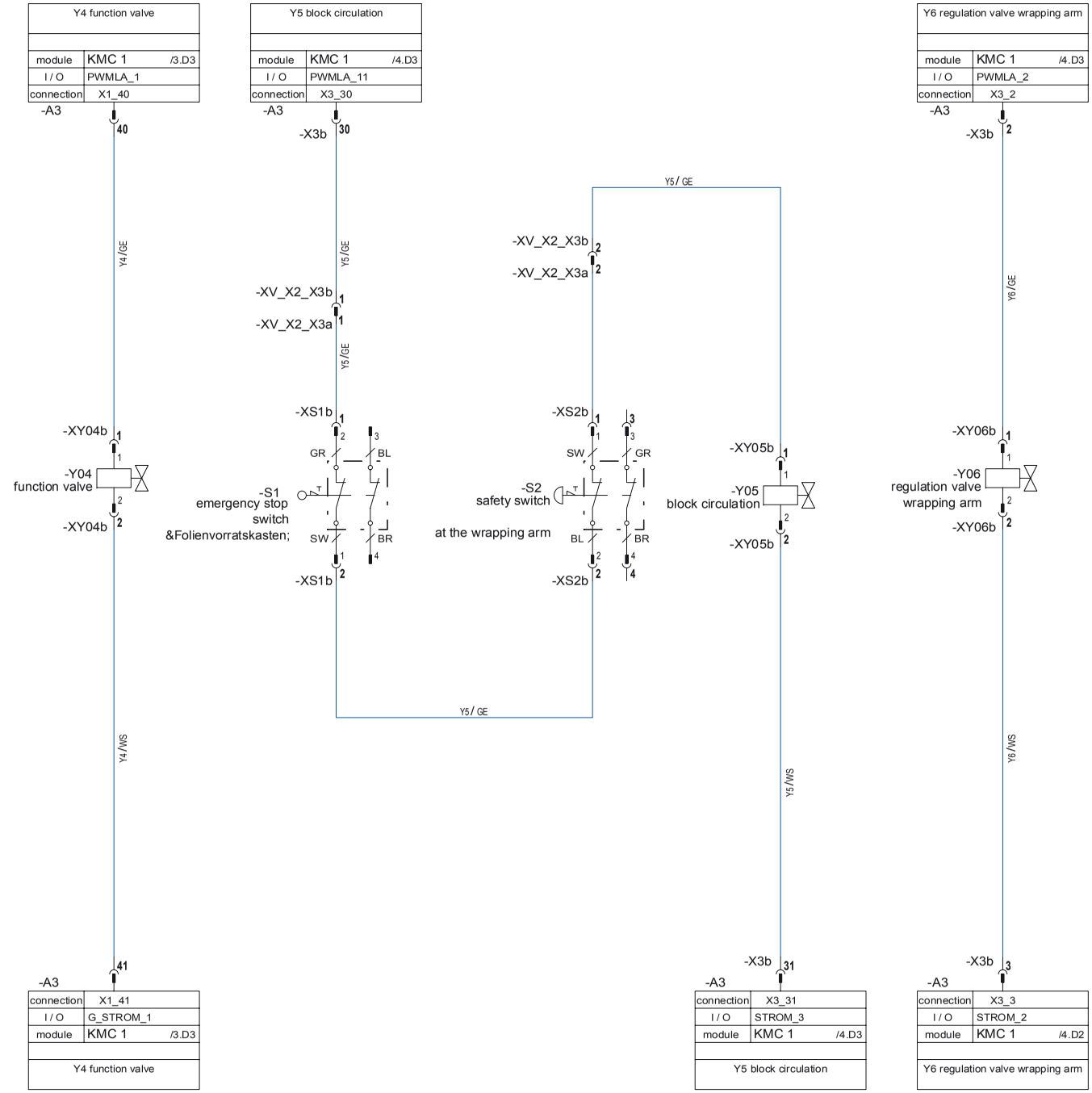
KRONE

Origin	Repl. f.	Repl. by

document-no.: D24
150100621 - 01

CV 210 XC
sensors &Wickler; 2

plant
location
sheet 8
from Sh.



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C				Created			
B			date	23.05.2011			
A			User	Albers			

KRONE

document-no.: D24
150100621 - 01

CV 210 XC
actuators 1

plant	
location	
sheet	9
from	Sh.

C				Created	KRONE	document-no.: D24 150100621 - 01	CV 210 XC actuators 2	plant
B			date	23.05.2011				location
A			User	Albers				sheet 10
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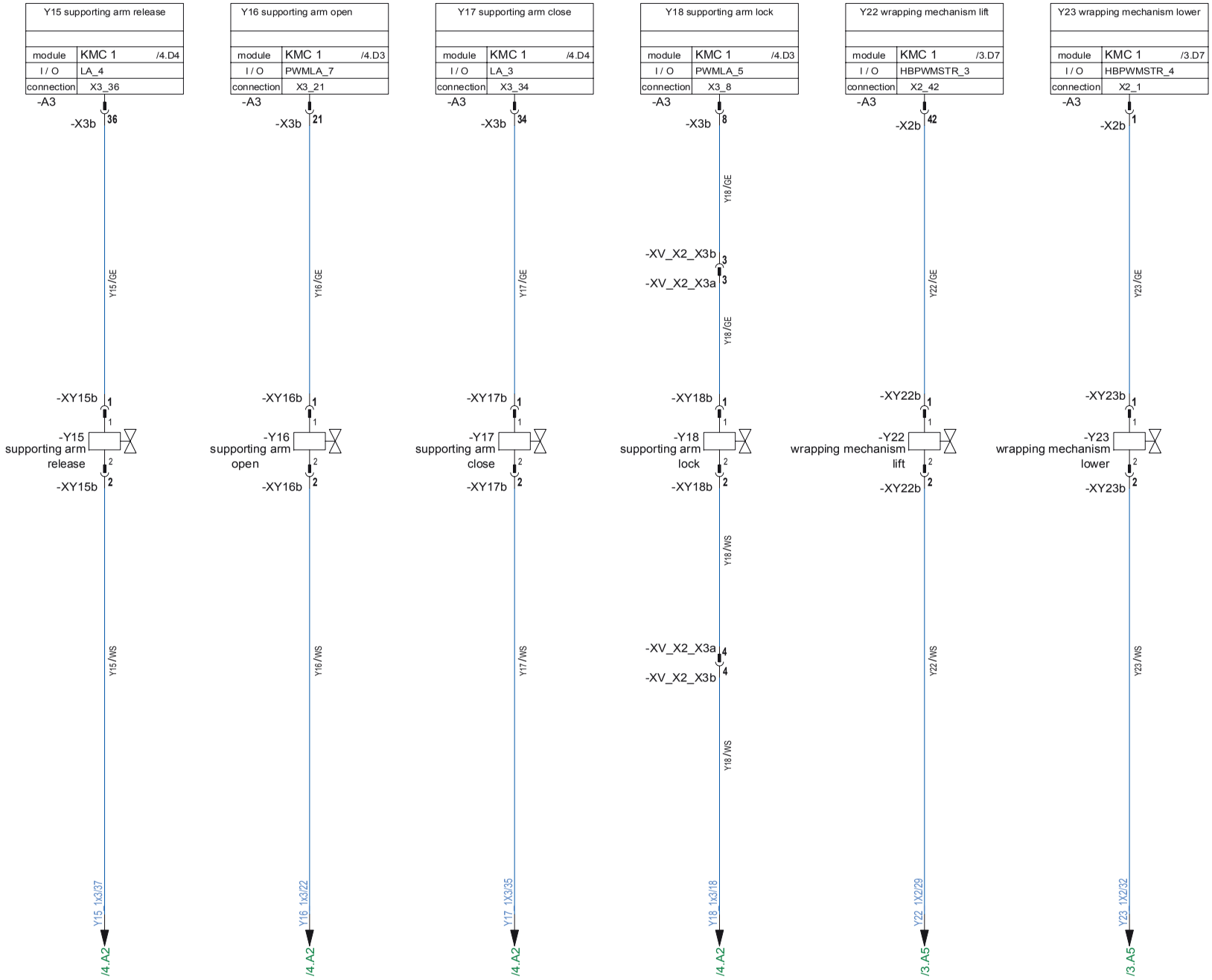

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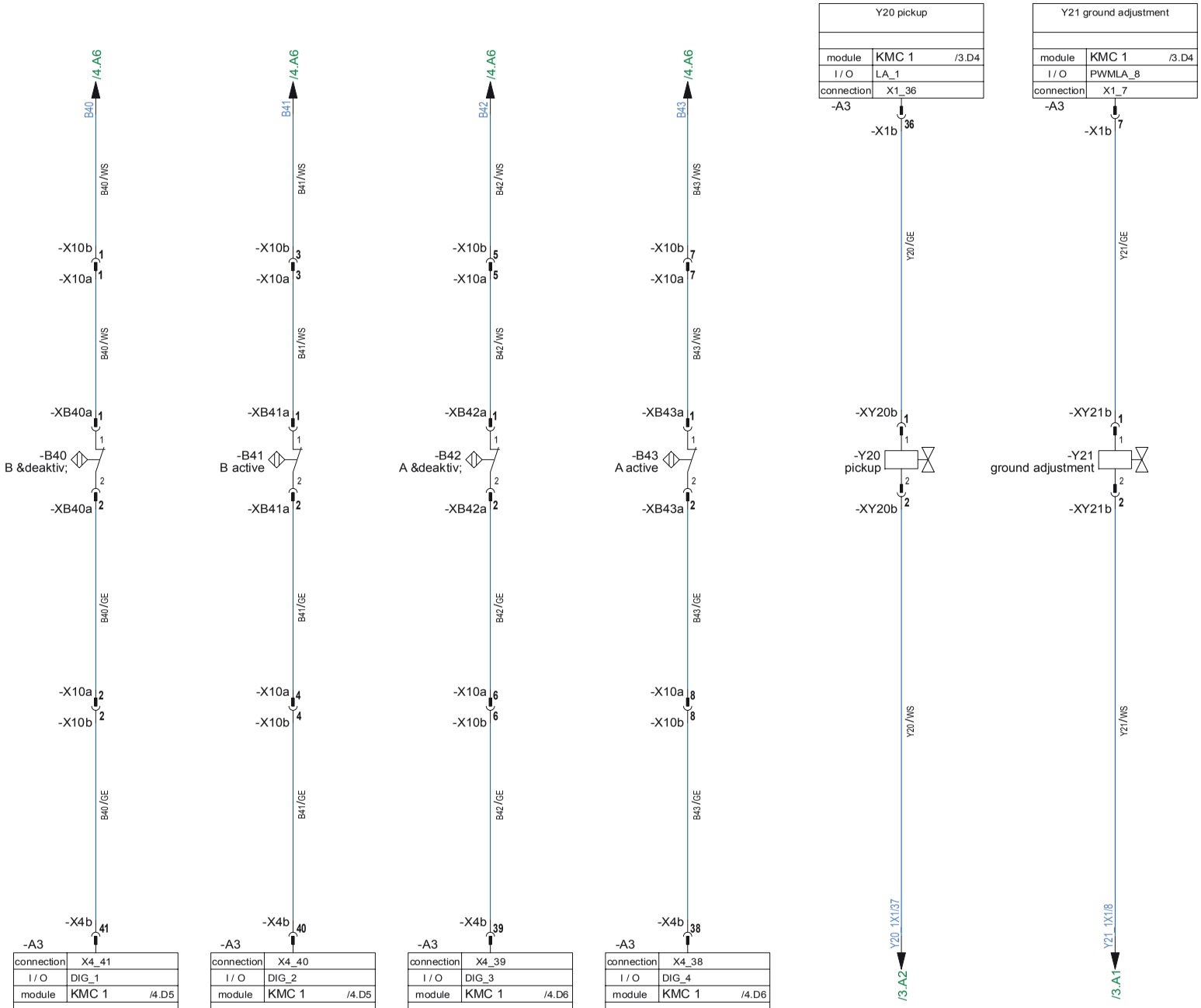
B				date 23.05.2011			
A				User Albers			

KRONE

document-no.: D24
150100621 - 01

CV 210 XC
actuators 3

plant
location
sheet 11
from Sh.



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A			User albers
			Proved

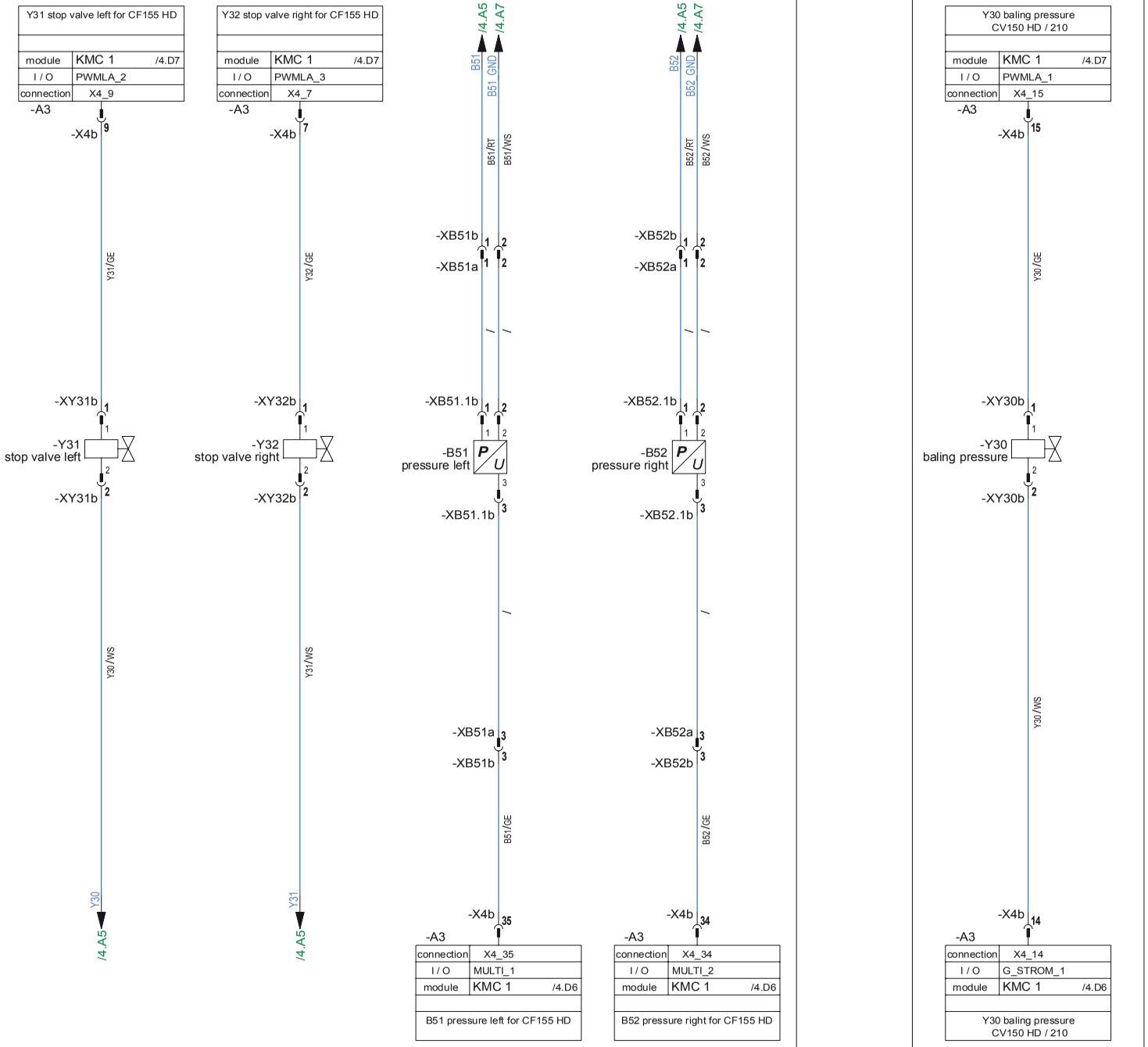
KRONE

Origin | Repl. f. | Repl. by

document-no.: D24
150100621 - 01

option blade control
hydraulic

plant
location
sheet 12
from Sh.



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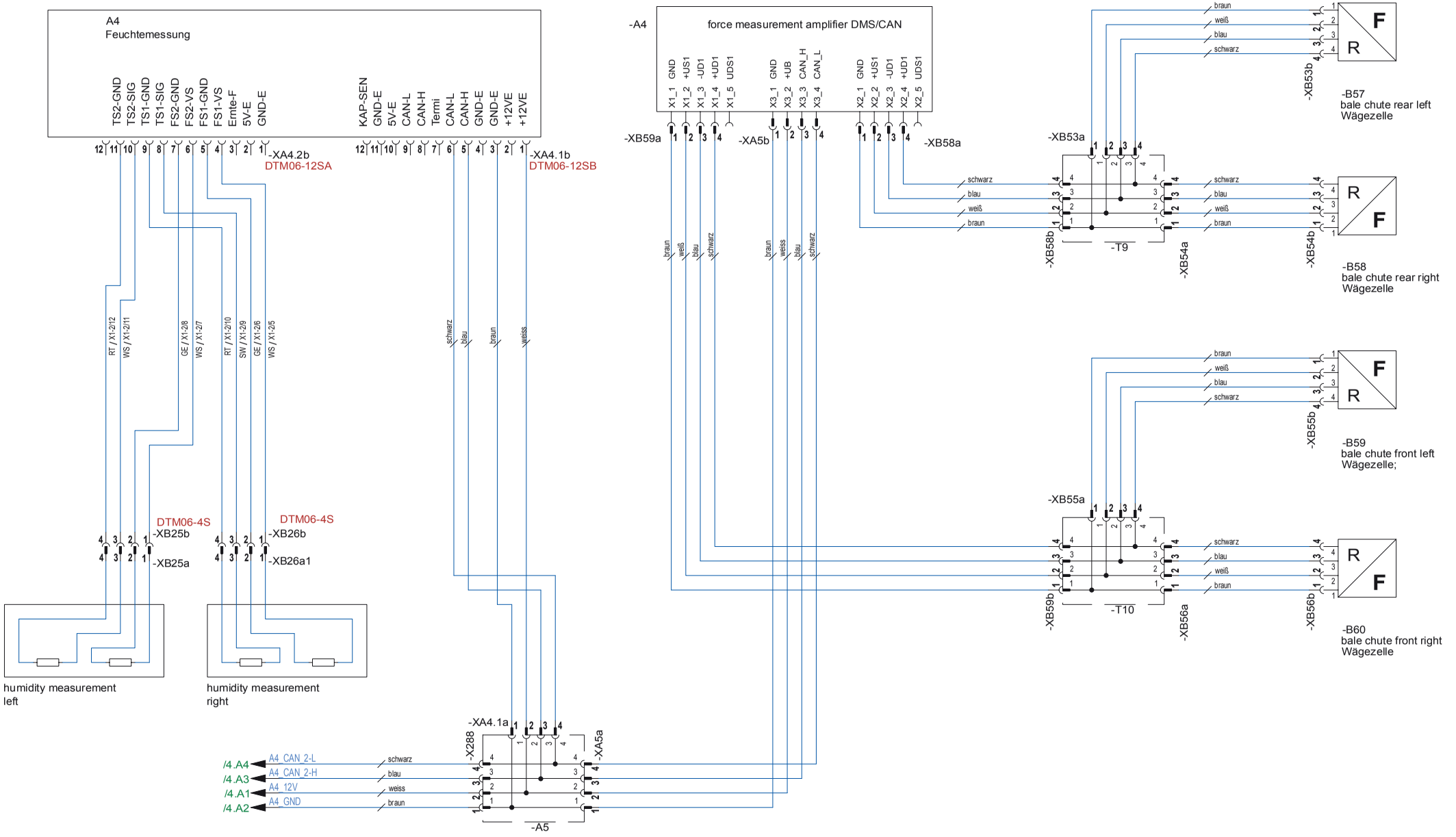
C				Created			
B				date			
A				User	albers		

KRONE

document-no.: D24
150100621 - 01

option baling pressure

plant	
location	
sheet	13
from	Sh.



C					Created	KRONE	document-no.: D24 150100621 - 01	electronic load sensing equipment	plant
B				date					location
A				User	albers				sheet 14
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